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Caribbean Social Protection Reponses to Surging Inflation

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Acknowledgments

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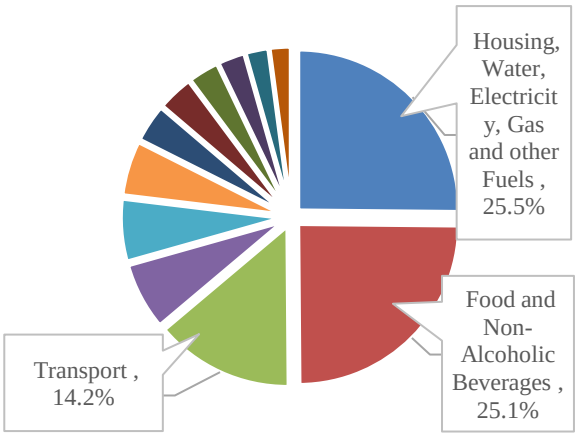
Executive Summary

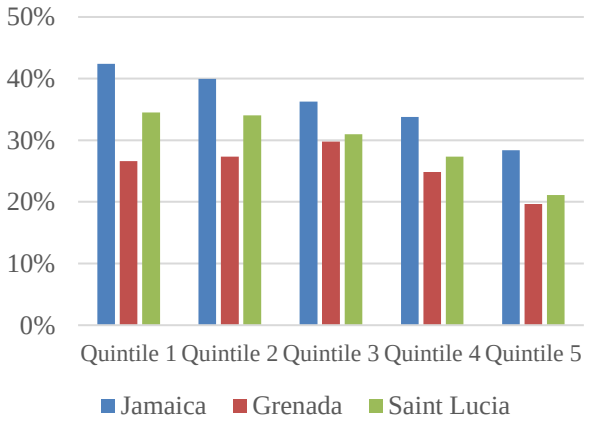
In 2022, the Caribbean experienced an extraordinary inflation surge not seen in over a decade, hitting Caribbean households just as they were recovering from the economic repercussions of the COVID-19 pandemic and slowing recovery of living standards. Living costs in the Caribbean increased to a 14-year regional high in 2022. Inflation rates varied considerably across the region, ranging from just below 3 percent in Grenada to over 52 percent in Suriname. The drivers of the inflation spike were prices for food, fuel, and energy. This consumption categories represent, on average, two-thirds of household consumption budget in the region (Figure 1). Rising living costs, especially for food, aggravated food security in the Caribbean, which had already deteriorated during the pandemic. The World Food Programme estimated that by August 2022, nearly 6 of every 10 Caribbeans faced food insecurity, the highest level since monitoring began in April 2020. Living cost increases tended to be the highest for the people at the bottom of the welfare distribution, but in contrast to what some other countries in Latin America experienced, variation across the welfare distribution was low, with high food prices affecting the poorer population disproportionately, while fuel and energy prices weighed more heavily on richer households. The inflation spike in 2022 limited the recovery of living standards that had initiated in 2021. Without the increased inflation, more people would have been lifted out of poverty in 2022.

Figure 0. Fuel, food, and energy prices drove the 2022 inflation spike, but their impact varied across the welfare distribution.

A. Average Consumer Price Index (CPI) weights by consumption category



B. Food share in total expenditures, by welfare quintile

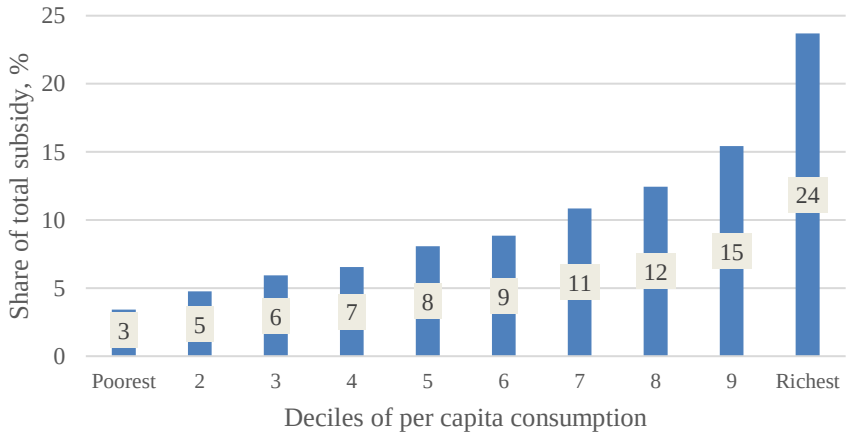


Source: World Bank staff calculation based on Consumer Price Index (CPI) data and weights from national statistical offices and ECCB for Panel A. World Bank staff calculation based on Jamaica Survey of Living Conditions 2021, Grenada Survey of Living Conditions and Household Budgets (SLC-HBS) 2018, and Saint Lucia SLC-HBS 2016 for Panel B.

Faced with soaring inflation, Caribbean policymakers seeking to mitigate the negative impacts on the population, especially on poor households, responded predominantly through subsidies, tax measures and social assistance interventions. In the Caribbean, 94 different measures in response to the inflation shock were enacted in 23 economies. Of these, 35 percent were subsidies, 28 percent tax measures, 22 percent social assistance, 8 percent labor market programs, 4 percent social insurance, and 1 percent trade-related measures. These policy response measures have benefited about 7 million individuals, or 15.0 percent of the total population in the Caribbean region, with an expenditure of approximately US$664 million, equivalent to 0.21 percent of regional gross domestic product. Governments introduced most of the crisis mitigation measures in mid-2022. 2023 brought social pension increases in Guyana and new minimum wage hikes in Belize and Jamaica.

Subsidies, the single most used policy measure in the Caribbean, are relatively easy and swift to implement; however, this intervention is costly, regressive, and detrimental to the environment. Universal subsidies are the policy response measure with the highest fiscal cost and the better-off people receive more of the benefits than the more vulnerable households. For instance, in response to the inflationary shock, the most common subsidy in the Caribbean were electricity subsidies. While this measure may be intended to benefit the poor disproportionately, the bulk of the benefits accrue to those with the highest levels of consumption. As shown in Figure 2 below, based on data from Jamaica, people at the top ten percent of the welfare distribution could get as much as seven times more electricity subsidy than those in the lowest decile. Additionally, subsidies can distort the price of the commodity being subsidized and may induce over-consumption and reduced interest in commodity-saving measures.

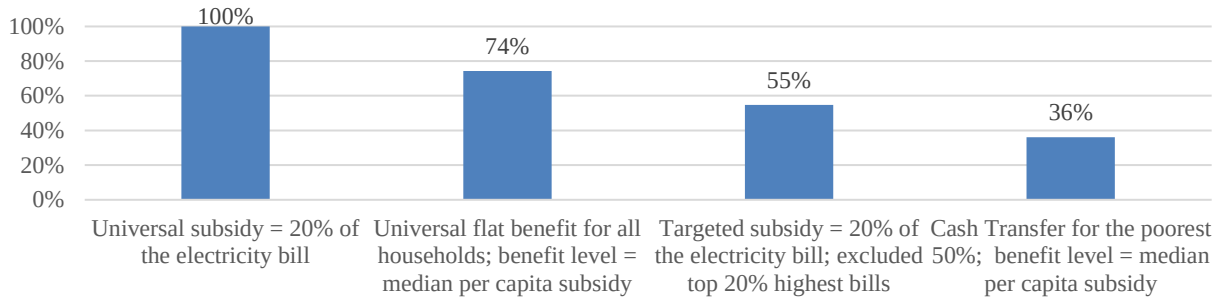
Figure 2. Universal electricity subsidies benefit disproportionately the better-off people.



Source: World Bank staff calculation based on JSLC 2021.
Note: the estimates assume a subsidy rate of 20 percent of households monthly electricity bill.

Alternative policy response measures, such as targeted subsidies and cash transfers, can significantly reduce the fiscal cost, improve equity, and be environmentally friendly. Analyses underpinning this report use household survey data for Jamaica to compare the cost and distributional outcomes of subsidies (universal or targeted) with other types of social protection interventions, such as cash transfers (universal or targeted). The findings suggest that fiscal savings and household welfare improve when switching from universal to targeted subsidies, to universal flat benefit cash transfers, and further to targeted cash transfers. For instance, the government of Jamaica implemented a targeted electricity subsidy that excluded the 20 percent of consumers with the highest bills. This subsidy costed about 45 percent less than a universal subsidy. Switching from universal subsidies to other compensatory measures, such as targeted cash transfers for the poorest half of the population, could further increase fiscal savings to 64 percent, according to World Bank staff calculations, as shown in Figure 2.

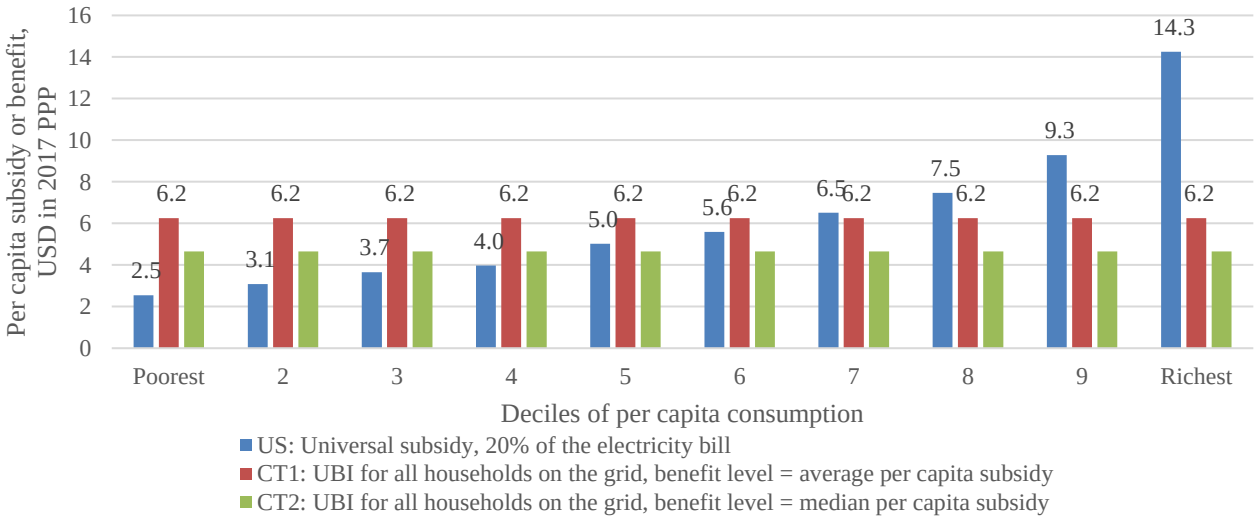
Figure 3. The cost of targeted subsidies and cash transfers relative to the universal subsidy is significantly lower.



Source: World Bank staff calculation based on JSLC 2021.

Distributional outcomes also improve significantly when consumption-based universal subsidies are switched out for either universal or targeted flat benefit cash transfers. Half of the population could see their welfare increase if they were to receive a lower-cost cash flat benefit instead of a universal subsidy. The lowest income quintile could receive up to 2.5 times more in terms of benefits than from subsidies if they were to receive a flat benefit equal to the average per capita subsidy, as shown in Figure 3. Such savings and welfare improvements highlight the value of investing in an adaptive social protection system, preparing in advance for shocks. In addition to its fiscal and welfare impacts, reorienting electricity or fuel subsidies toward cash transfers has positive environmental effects by removing price distortive measures.

Figure 4. Cash Transfers with a flat benefit level are more progressive than a universal subsidy.



Source: World Bank staff calculation based on JSLC 2021.

To strengthen the adaptive capacity of SP systems in the Caribbean, especially to deliver successful cash transfer interventions, improvements to SP programs and delivery systems are required. The building blocks of adaptive SP systems are delivery systems, data and information, financing mechanisms, and institutional and policy frameworks. To strengthen the adaptive capacity of SP systems in the Caribbean, reforms are required across all building blocks. In this report, we focus on strengthening the dimension of programs and delivery systems, which can increase the feasibility of using cash transfer programs to respond to shocks. The most critical steps in the delivery chain to successfully deliver cash transfers in a timely manner are intake and registration, needs

assessment, enrollment, and payments. This work offers a roadmap and provide guidance on improvements to the SP delivery systems, especially on the key steps of the delivery chain and the underlying information systems. These points aim to foster policy discussion on potential country specific reforms, recognizing the heterogeneity of country contexts, institutional capacity, and maturity levels of SP delivery systems.

- **Intake and registration.** To strengthen this process, adequate organizational structures, human and material resources, and information technology (IT) systems are required. It is also recommended to integrate an on-demand intake and registration mechanism, adaptable to meet surge demands post-disaster. This would include emergency protocols in place, contingent capacity pre-identified to collect additional data rapidly and at scale, and ability to mobilize local organizations and humanitarian actors if needed. To be effective, these recommendations need to be implemented urgently before the next shock.
- **Needs assessment.** An established system has a standardized and automated mechanism for assessing needs and conditions, based on clear eligibility criteria, and is updated regularly to determine continuing eligibility. Verification processes are in place, both in person and for cross-checking with other data sources. To be effective, social registry data should be current and with high national coverage, particularly in areas prone to or vulnerable to shocks, to inform preparedness and response. In addition, social registries shall be interoperable with other existing administrative registries (e.g., IDs, Tax records, Social Insurance) to allow for rapid cross-checking and validation of information.
- **Enrollment.** Established procedures and requirements for enrollment of new beneficiaries are adapted and streamlined for shock responses, with emergency protocols and potential requirements waivers. Procedures to ensure vulnerable groups have access during crises are in place, such as special assistance for filling out forms. Automatic enrollment procedures exist and governments may consider pre-enrolling vulnerable and at-risk households in regions with recurrent shocks.
- **Payments.** An adaptive payment system would be (i) predominantly electronic (although it can be complemented with manual mechanisms when needed); (ii) use transactional accounts and allow easy cash out from accounts; and (iii) offer choice in payment method and provider. In addition, protocols and measures are in place to make payment mechanisms adaptable, including alternative delivery mechanisms and stand-by agreements with service providers. Digital infrastructure and ecosystems in the Caribbean still challenge the SP digitalization of SP, but there has been progress and a few promising innovations.
- **SP information systems.** Caribbean countries should continue to advance toward social protection information systems (beyond single intervention systems). The goal is to develop integrated and interoperable information systems that are risk informed, including data useful for adaptive SP actions. This ideally would allow for data exchange with sectors relevant for ASP, including disaster risk management and humanitarian actors, and would contain high-quality and updated data.

Finally, to strengthen the adaptive capacity of SP systems in the Caribbean, further progress on the adaptive social protection building blocks is necessary. This includes developing adequate disaster risk management and SP legislation and policies, and effective coordination mechanisms; developing disaster risk financing instruments that are adequate to respond to potential emergencies, with funding mechanisms for adaptive SP; and closing SP coverage gaps and strengthening complementary measures, such as unemployment insurance and economic inclusion interventions to link SP beneficiaries and poor people to employment opportunities and complementary services beyond SP; among others.

Acronyms

ASP	Adaptive Social Protection
BCCAT	Belize COVID-19 Cash Transfer
BOOST	Building Opportunities for Our Social Transformation
CARICOM	Caribbean Community
CCT	Conditional Cash Transfer
CPI	Consumer Price Index
CT	Cash Transfer
DRM	Disaster Risk Management
ECCB	Eastern Caribbean Central Bank
FIBE	Ficha Básica de Emergencia (Basic Emergency Form)
GDP	Gross Domestic Product
LAC	Latin America and the Caribbean
IMF	International Monetary Fund
ILO	International Labour Organization
IT	Information Technology
JHDINA	Jamaica Household Disaster Impact and Needs Assessment
JSLC	Jamaica Survey of Living Conditions
MIS	Management Information Systems
MPO	Macro and Poverty Outlook
NGOs	Non-governmental organizations
PAP	Public Assistance Program
PATH	Program of Advancement Through Health and Education
PDNAs	Post-Disaster Needs Assessments
PMT	Proxy Means Testing
PPP	Purchasing Power Parity
SEED	Support for Education, Empowerment and Development
SP	Social Protection
TS	Targeted Subsidy (most of the time no use of the abbreviation)
UBI	Universal Benefit Income
UCT	Unconditional Cash Transfer

UNICEF	United Nations Children's Fund
US	Universal Subsidy (most of the time no use of the abbreviation)
WFP	World Food Program

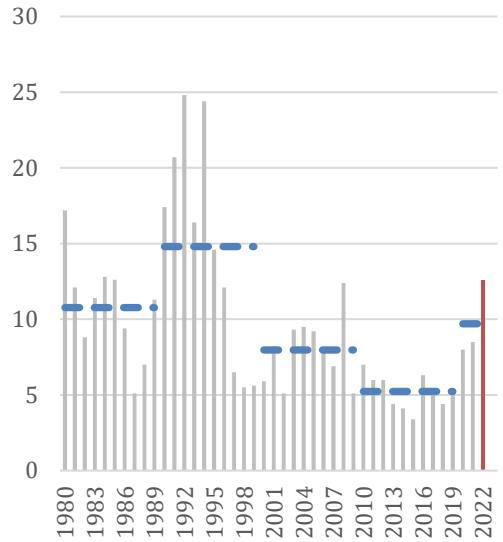
Chapter 1. The Distributional Impact of the 2022 Inflation Spike in the Caribbean

I. Introduction

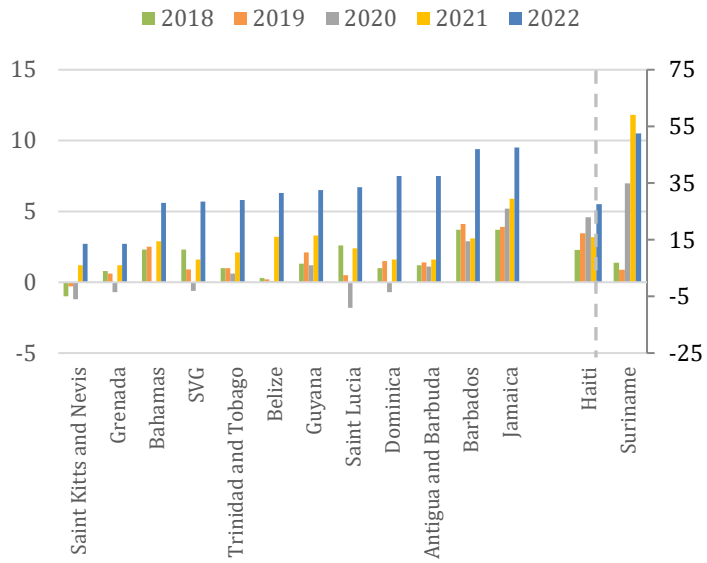
2022 was a year of unprecedented inflation in the Caribbean. For the first time in 14 years, inflation rose to double digits in the Caribbean as a whole. The International Monetary Fund estimates that in 2022, living costs increased by 12.6 percent in the Caribbean. This surge was a significant departure from the relatively low inflation rates observed over the 2010s. As shown in panel A of Figure 0.1, annual inflation for the Caribbean averaged 5.3 percent between 2010 and 2019. The average yearly increase in living costs was 9.7 percent for the period 2020–22, above the 8.0 percent observed in the first decade of the 2000s but still below the 14.8 percent observed in the 1990s. Apart from Haiti and Suriname, which have been grappling with high inflation in recent years, most of the countries in the Caribbean had not experienced similarly high inflation rates since the spike in 2008, and overall had seen relatively small increases in living costs since the start of the 21st century compared to the 1990s and 1980s.

Figure 0.1 High living cost increases in 2022 were a clear departure from previous years

A. Caribbean inflation rate, average consumer prices (annual % change)



B. Inflation rates of selected Caribbean countries, average consumer prices (annual % change)



Source: IMF via IMF Data Mapper, as of August 29, 2023.
Note: SVG = Saint Vincent and the Grenadines. The dashed blue line in panel A shows decade averages. The inflation rate for the Caribbean as a region is constructed as a weighted average, where the weights are gross domestic product (GDP) valued at purchasing-power-parities as a share of Caribbean total. Countries included are: Antigua and Barbuda, The Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, Haiti, Jamaica, Puerto Rico, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Suriname, Trinidad and Tobago. In panel B, the right axis refers to inflation rates for Haiti and Suriname. The left axis refers to inflation rates for the other 12 Caribbean countries. Differences in country-specific inflation rates for 2022 coming from the IMF Data Mapper as of August 29, 2023, and data provided by national statistical offices or central banks shown in subsequent parts of this chapter arise because the IMF Data Mapper at the time was showing projections for 2022. Country-specific inflation rates from the two types of sources are, however, qualitatively similar.

Inflation rates varied considerably within the region, however, and living costs increases in most countries were below the regional average. Suriname and Haiti stood out with inflation rates of 52.5 and 27.6 percent,

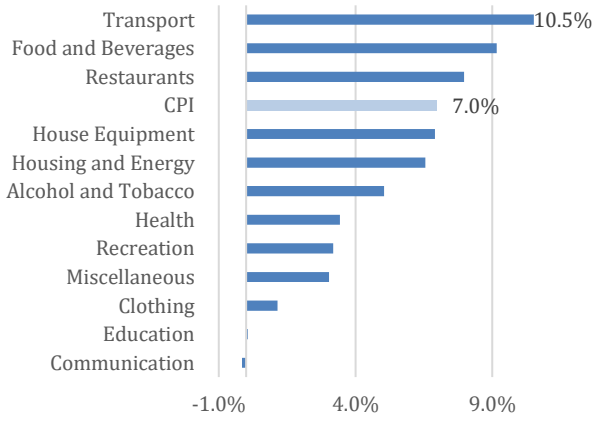
respectively, in 2022 (Figure 0.1, panel B). In Jamaica and Barbados, annual inflation reached nearly 10.0 percent. The lowest increases in living costs were observed in Grenada and Saint Kitts and Nevis with inflation rates just below 3.0 percent. Higher inflation rates of between 5.0 and 7.5 percent were observed in The Bahamas, Saint Vincent and the Grenadines, Trinidad and Tobago, Belize, Guyana, Saint Lucia, Dominica, and Antigua and Barbuda. Nevertheless, with the exception of Haiti and Suriname where inflation was already elevated, across-the-board living cost increases in 2022 represented a clear departure from the previous years of this decade.

II. The nature of the inflation spike

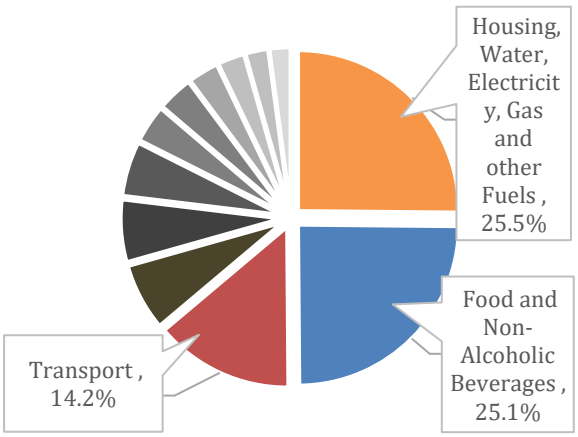
Fuel and food prices showed the strongest increases. Headline inflation is a composite of changes in prices of different consumption goods and services. But these prices do not necessarily increase at similar rates. Especially during periods of high inflation, there can be considerable dispersion in inflation rates across different categories of goods and services that are usually consumed by the population (World Bank, 2023a). Information to calculate annual inflation rates for different consumption categories is available for 10 countries from national statistical offices and the Eastern Caribbean Central Bank (ECCB). For these, median headline inflation in 2022 is 7.0 percent. There is considerable dispersion in inflation rates across consumption groups (Figure 0.2, panel A). The median annual inflation rate for 2022 ranges from -0.2 for communication to 10.5 percent for transport, the category with the highest inflation rate in 2022 for the median Caribbean country. Inflation rates were exceptionally high in food and beverages, and to a lesser degree, in restaurants at 9.2 percent and 8.0 percent, respectively.

Figure 0.2. Fuel, food, and energy prices drove the 2022 inflation spike

A. Median inflation rate by consumption category, average consumer prices (annual % change)



B. Average Consumer Price Index (CPI) weights by consumption category



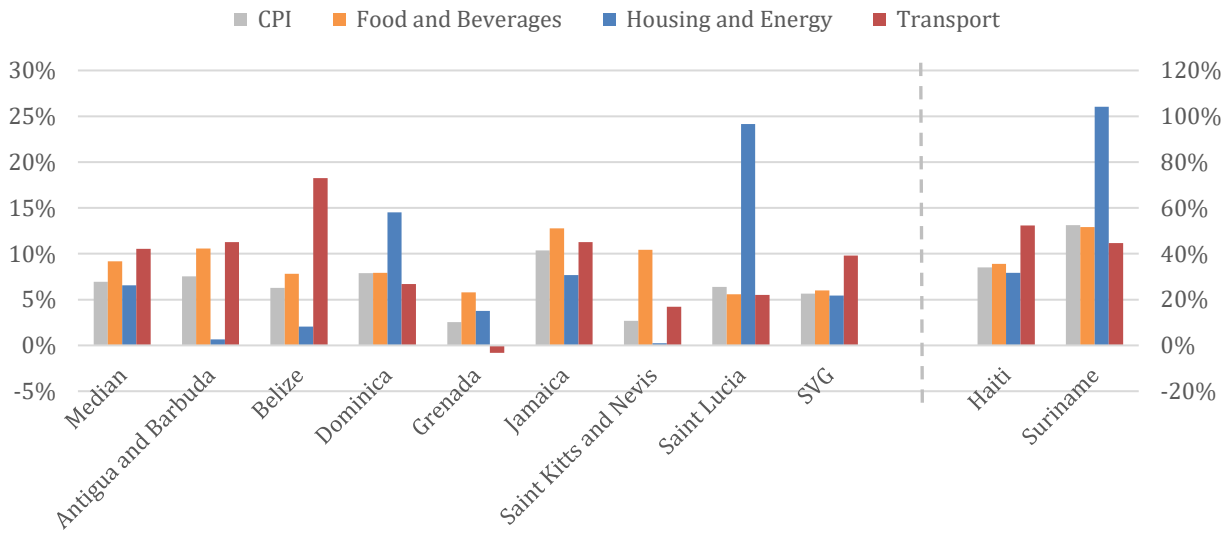
Source: World Bank staff calculation based on CPI data and weights from national statistical offices and ECCB.
Note: Panel A shows median inflation rates over Antigua and Barbuda, Belize, Dominica, Grenada, Haiti, Jamaica, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, and Suriname. Panel B shows the average over Antigua and Barbuda, The Bahamas, Barbados, Dominica, Grenada, Haiti, Jamaica, Saint Kitts and Nevis, Saint Lucia, and Saint Vincent and the Grenadines. Differences in included countries between panels A and B are due to differences in data availability.

High inflation was concentrated in the most important consumption items, with fuel, food, and energy prices the key drivers of the inflation spike. Of the three consumption categories with the highest median inflation rates in 2022, transport and food accounted for a considerable share of consumption expenditures, thereby weighting heavily in headline inflation. Together they accounted for about 40 percent of expenditures in the average Caribbean consumption basket (Figure 0.2, panel B). Expenditures on restaurants, on the other hand, accounted for a very small share (3.8 percent) of consumption expenditures. Housing and energy made up about a 25 percent share of

consumption and had relatively high price increases. The price hikes in fuel, food, and energy prices therefore took the heaviest toll on households in 2022.

Fuel and energy price dynamics varied across countries. In Belize, for instance, inflation of transport prices increased at almost triple the rate of overall inflation, reaching 18.2 percent (Figure 0.3). Saint Vincent and the Grenadines also experienced dispersion between the transport inflation rate of 9.8 percent and the overall inflation rate of 5.7 percent. However, transport inflation remained below headline inflation in 4 of the 10 countries with available data to calculate inflation rates by consumption categories. In Grenada, prices for this consumption category even decreased slightly in 2022 (annual inflation of -0.8%). Housing and energy goods prices including for electricity, gas, and fuels for purposes other than transport increased especially sharply in several countries**.** In Saint Lucia, the inflation rate of housing and energy goods of 24.1 percent was the highest among all consumption categories and almost four times the rate of headline inflation. Likewise, the inflation rate of housing and energy increased notably in Dominica and Suriname where it was also the category with the highest inflation rate in 2022. In Grenada, housing and energy inflation was also high relative to overall inflation.

Figure 0.3. Inflation dynamics varied across countries, 2022



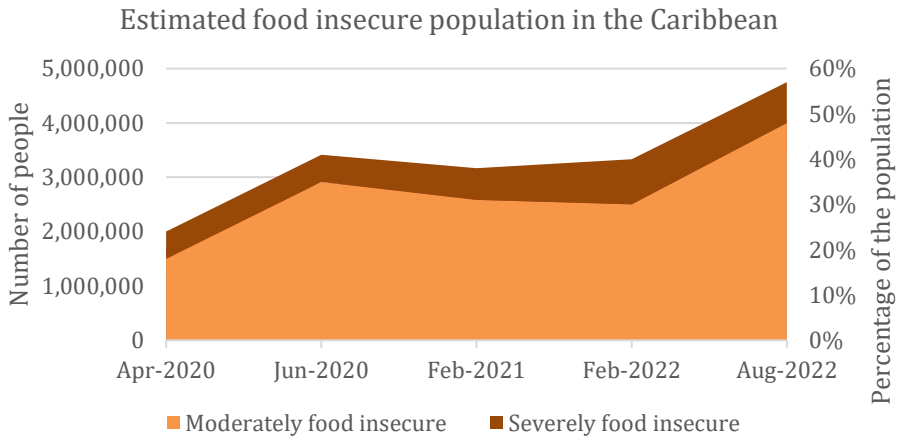
Source: World Bank staff calculation based on CPI data from national statistical offices and the ECCB.
Note: SVG = St. Vincent and the Grenadines. In panel B, the right axis refers to inflation rates for Haiti and Suriname. The left axis refers to the inflation rates of the other eight countries and the median inflation rates over all ten countries.

High food inflation was a common phenomenon observed across the region. The inflation rate in food was higher than in other categories across the board in the Caribbean. In 8 of the 10 countries with available CPI data to calculate inflation rates by consumption categories, food inflation was higher than headline inflation. The discrepancy was most pronounced in Saint Kitts and Nevis, where the inflation rate for the category of food and beverage products was almost four times the rate of headline inflation. In Grenada, food prices rose at almost twice the rate of overall inflation, though at 5.8 percent, they were still lower in comparison to the median of 9.2 percent for countries with available data. In most countries, food inflation was closer to overall inflation than in Saint Kitts and Nevis and Grenada, and in Saint Lucia and Suriname, inflation of this category was slightly below headline inflation.

III. The poverty and distributional impact of living cost increases in 2022

Rising food prices aggravated food security in the Caribbean, which had already deteriorated sharply during the pandemic. Inflation and increases of food prices, in particular, were generally modest in 2020 and 2021. But people lost employment and income during the pandemic, which drove deteriorations in food security indicators during this period. According to phone survey data collected and analyzed by the World Bank and the United Nations Development Programme in 2021, about 47 percent of the population in Caribbean countries had run out of food in the month prior to the survey due to lack of money or other resources—nearly double the proportion that reported having run out of food in the period prior to the pandemic (24 percent).[1] Moreover, deterioration in food security was more severe in Caribbean than in Latin American countries, where on average 25 percent of the population reported having run out of food in 2021. The World Bank – UNDP LAC High Frequency Phone Survey was not collected after 2021. But data from an online survey conducted by the Caribbean Community and the WFP starting in April 2020, suggest that the spike in inflation in 2022 aggravated the situation.[2] Estimates by the Caribbean Community (CARICOM) and the WFP, based on the data from the online survey, indicate that food security sharply deteriorated in the Caribbean over the course of 2022. By August 2022, according to the WFP, 57 percent of the population in the English-speaking Caribbean were suffering from food insecurity, up from 40 percent in February 2022, with 9 percent considered severely food insecure, and 48 percent moderately food insecure (Figure 0.4).

Figure 0.4. Rising food prices aggravated food security in the Caribbean, 2020–22



Source: CARICOM and World Food Programme. Caribbean Food Security & Livelihoods Survey, Regional Summary Report - May 2023.

Food insecurity affected the population with lower income to a higher degree and resulted in coping strategies that could have negative long-term effects on their welfare. The data from the Caribbean Food Security & Livelihoods Survey shows that food insecurity clearly deteriorates with decreasing income (Figure 0.5. Food insecurity and coping behavior were **widespread** among low-income individuals, panel A). From April 2020 and

[1] The LAC High Frequency Phone Survey (Phase II) was conducted in 24 countries in the LAC region and included two survey rounds that were collected between May 2021 and January 2022. Averages for 2021 are computed over the two survey rounds for each country. The Caribbean average includes Belize, Dominica, Guyana, Haiti, Jamaica, and Saint Lucia. Pre-pandemic information was collected using retrospective questions.

[2] The LAC High Frequency Phone Survey and Caribbean Community and WFP Caribbean Food Security & Livelihoods Survey are two different surveys with different methodologies. Results for the overlapping period of 2021 are therefore not fully comparable. However, the two surveys complement each other. While the Caribbean Community and WFP Caribbean Food Security & Livelihoods Survey can show that food insecurity increased dramatically in 2022, the LAC High Frequency Phone Survey and Caribbean Community can show that already in 2021, food insecurity was considerably worse than before the pandemic, highlighting the fact that the 2022 deterioration came on top of an already considerable worsening.

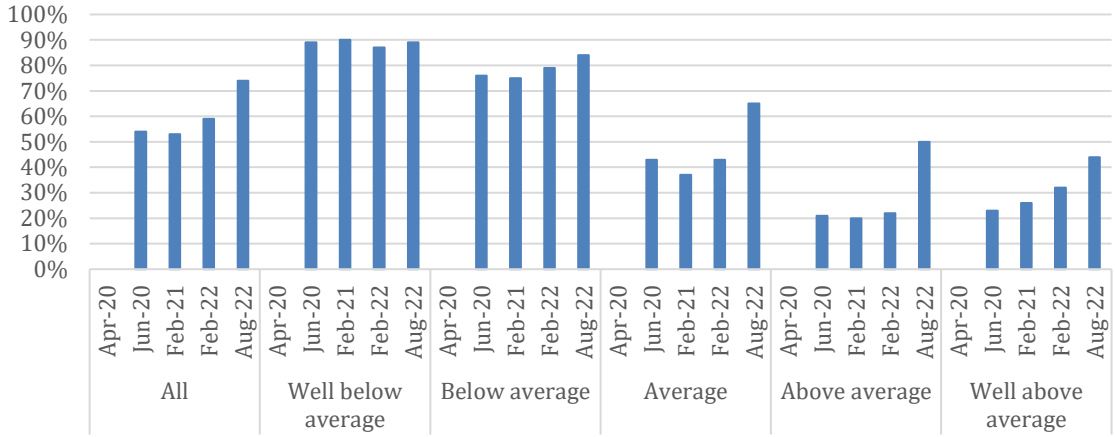
to August 2022, the respondents with the lowest household income had the highest proportion of respondents who had reduced their food consumption or were eating less-preferred food.[3] In August 2022, this was the case for about 90 percent of the respondents with household income well below the average; 84 percent of the respondents with household income below average, 65 percent for the respondents with average household income, 50 percent for those with above-average household income, and 44 percent for those with household income well above the average. It is noteworthy that among respondents with average household income or higher, the proportion of respondents who reported they had reduced their food consumption had increased markedly by August 2022. Those with lower household income were also more likely to engage in coping strategies that may negatively affect their well-being over the long term. More than 60 percent of the respondents with household income well below the average, for instance, had reduced essential expenditures, such as on education and health, and the proportion was similar for respondents who said they had sold productive assets to meet food needs. With increasing household income, these proportions decreased steadily across the household income distribution (**Error! Reference source not found.**, panel B).

The poor are more vulnerable to food price increases. CPI consumption weights mask considerable heterogeneity in consumption patterns across the distribution. Food usually accounts for a higher share of the total household budget at lower welfare levels. Moreover, since food is essential good and poor households are by definition already consuming less than what is deemed necessary, these households cannot easily adapt their consumption patterns to changes in prices. Wealthier households, on the other hand, are in a better position to cope with increases in living costs, for instance by using savings or switching to cheaper varieties of food. Microdata to assess the distributional impact of the 2022 inflation spike is available only for Grenada, Jamaica, and Saint Lucia (See Box 1.1 for details on data gaps in the Caribbean and on the data and methodology used to assess the poverty and distributional impact of inflation in 2022). The data confirm the usual welfare gradient of the importance of food in households' consumption baskets (Figure 0.6, panel A). Welfare quintiles are based on consumption welfare aggregates for Grenada and Saint Lucia, and an expenditure welfare aggregate for Jamaica. In Jamaica and Saint Lucia, the budget share of food is largest for the bottom quintile and declines with increasing welfare. On average, households in the poorest quintile in Jamaica spend 42 percent of their consumption budget on food and non-alcoholic beverages compared with 28 percent for those in the top quintile. In Saint Lucia, the expenditure share of food and non-alcoholic beverages is 34 percent for the bottom quintile and 21 percent for the top quintile. While the gradient is not as clear in Grenada, the budget share of food in the bottom quintile is higher (27 percent) than it is in the two top quintiles (20 percent).

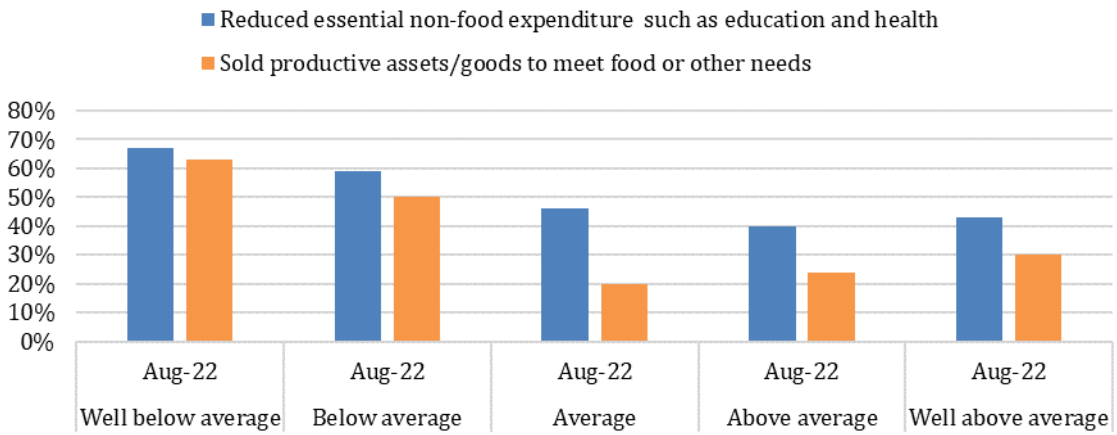
[3] Income groups are based on respondents' perception and classification into one of five categories: household income well below average, household income below average, average household income, household income above average, household income well above average.

Figure 0.5. Food insecurity and coping behavior were widespread among low-income individuals

Panel A. Respondents who reduced consumption or ate less-preferred foods over past seven days (%)



Panel B. Households' coping strategies in the 30 days prior to the survey, % of respondents

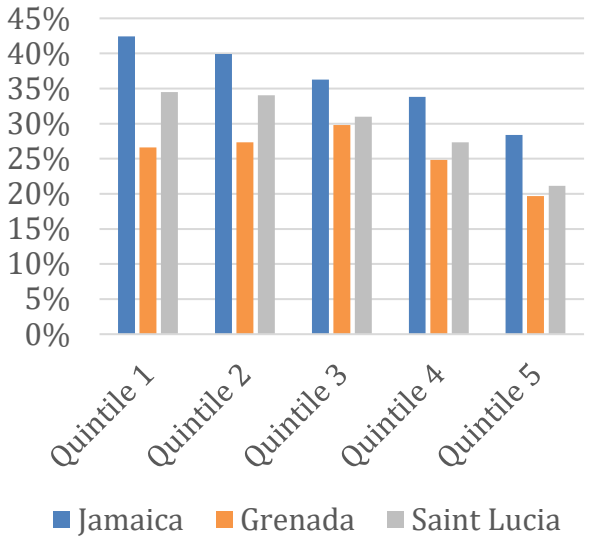


Source: CARICOM and World Food Programme. Caribbean Food Security & Livelihoods Survey Dashboard.
Note: Income groups are based on respondents' perception and classification into one of five categories, with their distribution shown behind each category name in parentheses: household income well below average (17%), household income below average (31%), average household income (35%), household income above average (12%), household income well above average (4%).

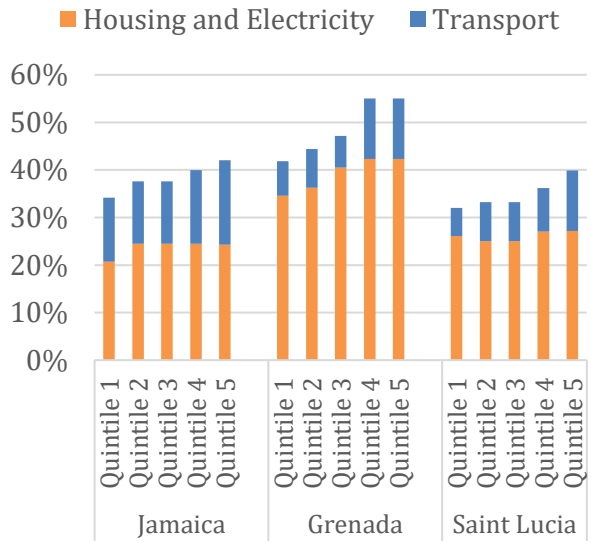
Rising fuel and energy prices weigh more heavily on the better-off population. Together, transport and housing and energy goods account for a considerable share of household expenditures. Their expenditure share increases over the welfare distribution, contrary to the food expenditure share (Figure 0.6, panel B). In Jamaica, the budget share of expenditures for transport and housing and energy is 34 percent for the bottom quintile of the welfare distribution and 42 percent for the top quintile. Proportions are similar in Saint Lucia at 32 percent for the bottom quintile and 40 percent for the top quintile of the welfare distribution. Households in Grenada spend a higher share of their consumption expenditures on transport and housing and energy, with the expenditure share of the bottom quintile at 42 percent and of the top quintile at 55 percent. In all countries, more of the expenditures go toward housing and energy than toward transport. The difference is starkest in Grenada where on average, the expenditure share of housing and energy expenditures is nearly five times that of transport expenditures. In Saint Lucia, housing and energy expenditures are about three times as high as transport expenditure, and in Jamaica, the share of housing and energy expenditure is on average 1.6 times the share of transport expenditures.

Figure 0.6. Consumption patterns vary across the welfare distribution, 2022

A. Food share in total expenditures, by welfare quintile



B. Transport and housing and energy share in total expenditures, by welfare quintile



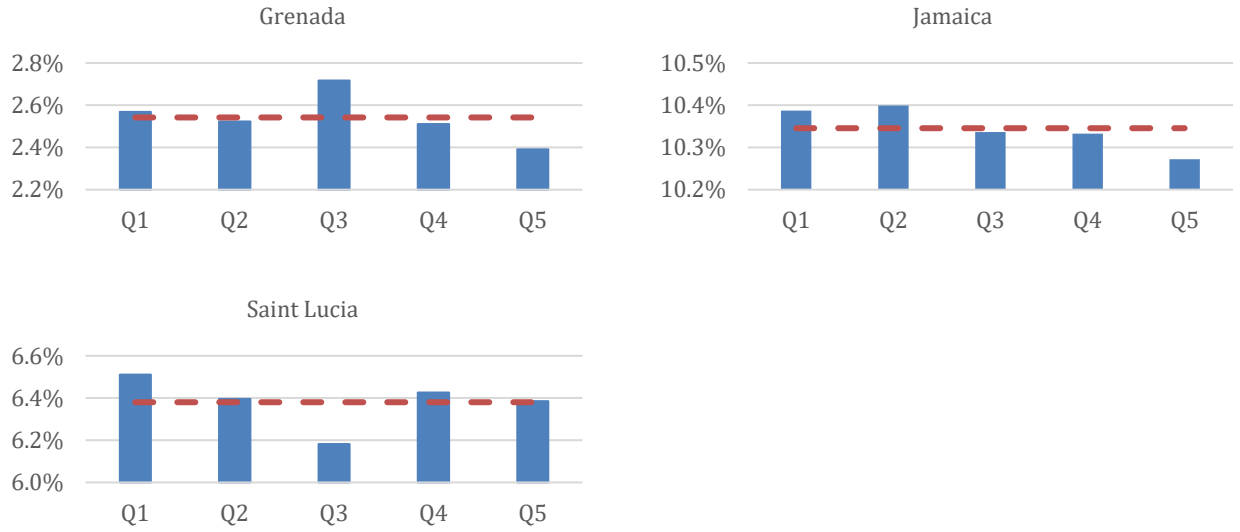
Source: World Bank staff calculation based on JSLC 2021, Grenada SLC-HBS 2018, and Saint Lucia SLC-HBS 2016.
Note: Welfare quintiles are based on consumption welfare aggregates for Grenada and Saint Lucia, and an expenditure welfare aggregate for Jamaica.

While the population at the bottom of the welfare distribution tended to experience some of the highest living cost increases, variation was low due to these different consumption patterns amid rising food, fuel, and energy prices. Varying consumption patterns across the welfare distribution may lead to differential increases in living costs. The weights used to construct the overall inflation rate reflect average consumption patterns across the whole population. If the poor consume a higher share of those goods and services whose prices increased the most, their living costs will have risen more than those of the better-off population. Quintile-specific inflation rates for Grenada, Jamaica, and Saint Lucia in 2022, however, show relatively low variation in living cost increases over the welfare distribution (Figure 0.7). In Grenada, they range from 2.4 to 2.7 percent, with an overall inflation rate of 2.5 percent. In Jamaica, quintile-specific inflation rates range from 10.3 percent to 10.4 percent, with an overall inflation rate of 10.3 percent in 2022. In Saint Lucia, the quintile-specific inflation rates range from 6.2 to 6.5 percent while the overall inflation was 6.4 percent in 2022. This is driven by an increase in the cost of food on the one hand, which had a higher contribution to the inflation rate of poorer households, and an increase in the prices of other goods and services, which mattered more for the richer quintiles (Annex B shows the contribution of price increases of different consumption categories to the quintile-specific inflation rates). Nevertheless, households in the bottom quintile tend to experience some of the highest inflation rates.

Variation in living costs across the welfare distribution in the Caribbean was also low compared with the variation in other countries in the LAC region such as Argentina and Mexico. In a range of countries where comparable analyses were done, living costs generally rose more steeply among the poorer population in 2022, although the differences across the welfare distribution in some countries were more pronounced than in the Caribbean countries analyzed here. The International Labour Organization (ILO) Global Wage Report 2022–23

estimates that in Mexico, households in the bottom decile of the income distribution experienced inflation of 8.9 percent in 2022 while living costs for those in the top decile increased by 6.8 percent. Of the countries studied by the ILO, those with particularly pronounced differences were Spain, Argentina and Mongolia; variation was less, and more in line with that in the Caribbean countries studied in this report (Grenada, Jamaica, and Saint Lucia), in Canada, Switzerland, France, and the United Kingdom. Only in South Africa did living costs, driven by high transport costs, increase across the welfare distribution. These findings highlight the counteracting effect that energy and fuel prices had on the regressive impact of food price inflation when looking at overall living costs.

Figure 0.7. Living cost increases were similar across the welfare distribution, 2022



Source: World Bank staff calculation based on JSLC 2021, Grenada SLC-HBS 2018, and Saint Lucia SLC-HBS 2016 and on CPI data from STATIN and ECCB. See Annex C for details.

Box 1.1. Details on poverty measurement in the Caribbean and the methodology used to nowcast the poverty and distributional impacts of inflation in selected Caribbean countries in 2022

Lack of frequent data collection inhibits poverty monitoring in the Caribbean. Most of the countries in the English-speaking Caribbean as well as Haiti do not monitor poverty on a regular basis. A study conducted in 2015 identified nine Caribbean countries as data deprived, meaning they had only one or fewer national poverty estimates available within any 10-year period (Serajuddin et al. 2015). The recommended frequency is three to five years. Currently, 6 of 14 countries in the Caribbean have poverty estimates available only for the first decade of the 2000s (Table 0.1 Availability of poverty headcount rates at national poverty lines and microdata). Two others have estimates available from the early 2010s. With the exception of Jamaica, which has a long history of monitoring poverty on an annual basis, the most recent national poverty estimates are between five and seven years old and available for only five countries in the Caribbean.

Table 0.1 Availability of poverty headcount rates at national poverty lines and microdata

Country	Year	National poverty rate	Poverty at US$6.85 a day in 2017 PPP	Microdata available to World Bank

Antigua and Barbuda	2005	18.3%		
Bahamas, The	2013	12.5%		
Barbados	2016	25.7%		Yes
Belize	2018	52.0%		Yes
Dominica	2008	28.8%		
Grenada	2018	24.8%	13.3%	Yes
Guyana	2006	36.1%		
Haiti	2012	58.5%		
Jamaica	2021	16.7%	15.6%	Yes
St. Kitts and Nevis	2008	21.8%		
Saint Lucia	2016	25.0%	8.7%	Yes
Saint Vincent & the Grenadines	2007	30.2%		
Suriname	2016	26.2%		Yes
Trinidad and Tobago	2005	16.7%		

Note: Table shows most recent values at national poverty lines using consumption and expenditure welfare aggregates. Belize provides a poverty headcount rounded to the nearest integer. See Annex A for respective sources.

National poverty rates generally are not directly comparable. First, the thresholds to identify the poor population are often different in different countries. Each country applies a national poverty line that is based on the specific cost of basic needs in that country The cost of acquiring enough food for adequate nutrition (usually about 2,100 calories per person per day) is estimated using household survey data on consumption expenditures, and costs of essentials such as clothing and shelter are then added. All of these costs may differ from country to country. Moreover, national poverty lines consider national consumption preferences, and these can vary across countries as well. The national consumption basket deemed essential to satisfy basic needs, as well as the cost of its components, might therefore be different in each country. As a result, the thresholds to identify the poor population in each country are usually not the same. Second, living standards are approximated using a monetary measure that is an aggregation of households' income or the monetary value of their consumption. When building this aggregate, a range of country-specific decisions will affect comparability. Among these are decisions on whether to use an income or consumption aggregate, on which income or consumption components to include in the welfare aggregate, and whether to consider the value of food consumed in the reference period or expenditures incurred, to name only a few.

To monitor progress in global poverty reduction and allow for comparability, the World Bank uses global poverty lines and, to the extent possible, harmonized welfare aggregates. The World Bank uses the international poverty line of US$2.15 in 2017 purchasing power parity (PPP) to measure extreme poverty and track progress toward Sustainable Development Goal 1 to eradicate extreme poverty globally by 2030. Two additional poverty lines complement the international poverty line. These are the lower-middle-income poverty line of US$3.65 in 2017 PPP and the upper-middle-income poverty line of US$6.85, which are more meaningful benchmarks for the cost of basic needs in countries at higher income levels. To ensure comparability when

applying these lines to estimate poverty, the World Bank, to the extent possible, uses harmonized welfare aggregates that aggregate households' income or the monetary value of their consumption.

Until recently, harmonized welfare aggregates were not available for the Caribbean even when the underlying microdata were accessible. In the LAC region, most countries use an income-based welfare aggregate for poverty measurement. Therefore, the LAC regional harmonized poverty database is currently comprised of income-based measures of poverty. The Caribbean is the exception in that consumption or expenditure is used primarily to measure poverty. To maintain comparability across countries, the mixing of income- and consumption-based measures in the LAC harmonized database was not done in the past. As a result, most Caribbean countries do not feature in the World Development Indicators, the Poverty and Inequality Platform, regional reports, or other standardized briefs even if the underlying microdata are available. In 2021, the World Bank together with the Center for Distributive, Labor and Social Studies started to construct harmonized consumption-based welfare aggregates for poverty measurement in the Caribbean for countries with recent household surveys and available microdata. At the time of preparation of this report, the project was not yet concluded. Preliminary versions of the harmonized data were available for Grenada, Jamaica, and Saint Lucia. The analyses in this report use the versions of the harmonized data sets as of July 26, 2023.

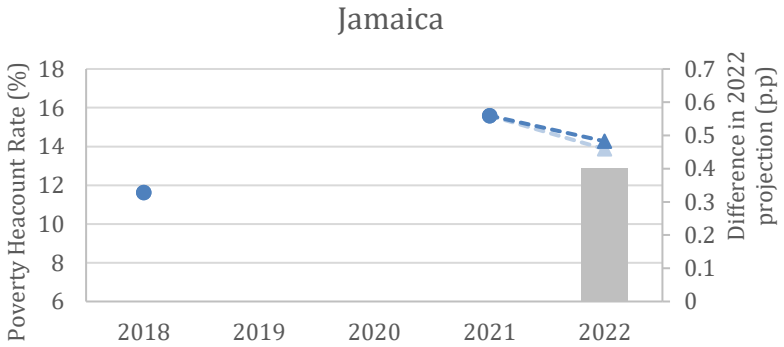
Available poverty estimates for Caribbean countries based on the harmonized welfare aggregates and poverty line of US$6.85 differ from national estimates due to differences in poverty lines and construction of the welfare aggregate. Poverty estimates using US$6.85 a day in 2017 PPP and the harmonized welfare aggregates are lower than official poverty estimates (Table 1.B1). One reason is that national poverty lines in Grenada, Jamaica, and Saint Lucia are higher than the upper-middle-income poverty line of US$6.85 a day in 2017 PPP. This indicates that living standards are higher in the three countries than in the median upper-middle-income country. Further differences arise from inclusion of different consumption components in the welfare aggregate, for instance the value of products consumed that were produced by the household and the use value of durable goods that the household possesses.

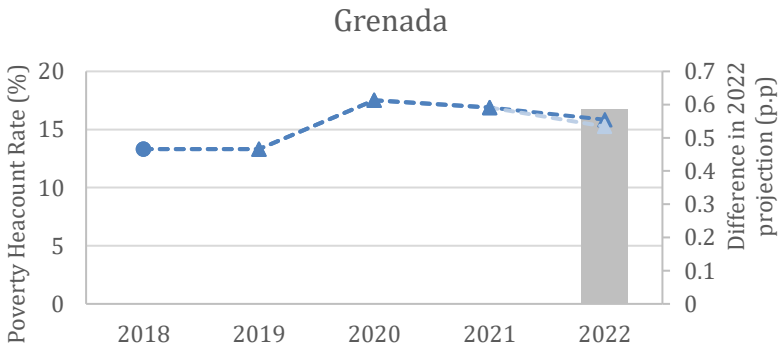
The poverty and distributional impact of inflation in 2022 on poverty are assessed by nowcasting poverty from the latest survey year available, using nominal per capita growth in GDP and inflation rates that vary across the welfare distribution depending on the consumption patterns of households. A simple and effective way to nowcast poverty from the latest year with available data to the present is to scale up the welfare distribution by a fraction of real per capita GDP growth (Mahler et al. 2022). However, this approach does not take into account that consumption might change at different rates across the income distribution. In the case of inflation, the purchasing power of poorer households might be more severely affected if a larger share of their consumption baskets consists of goods that experienced higher inflation, as is often the case with food. Therefore, instead of using the same growth rate across the distribution to bring the consumption aggregate to the present, this report relies on quintile-specific growth rates that are constructed using nominal per capita GDP growth rates for the years since the latest survey to the present and deflated by the quintile-specific inflation rate for each year. The quintile-specific inflation rates are constructed using CPI data for different consumption groups and their expenditure shares for each quintile. This provides an estimate of poverty in 2022 that incorporates the impact of inflation. To assess how the 2022 inflation spike affected poverty, inflation projections for 2022 prior to Russia's invasion of Ukraine are used. Annex C provides details on the approach. Like the original approach, which scales up the welfare distribution by a fraction of real per capita GDP growth, this modified version likely becomes less accurate, the longer the distance between the year for which the nowcast is made and the latest year with available data. Nowcasted poverty estimates for Saint Lucia and Grenada, which are based on data from 2016 and 2018, respectively, are therefore probably less accurate than those for Jamaica.

While projections point to a decline in poverty since 2021, poverty was still above pre-pandemic levels in 2022. Following the severe deteriorations in living standards and rising poverty observed in 2020 as a consequence of the COVID-19 pandemic, poverty started to decline in 2021 in Grenada, Jamaica, and Saint Lucia (Figure 0.8, panel A). In Grenada, the proportion of people living with less than US$6.85 a day in 2017 PPP decreased slightly from an estimated 17.5 percent in 2020 to 16.9 percent in 2021. Thanks to its strong economic recovery, Saint Lucia experienced the strongest reduction in poverty of the three countries, with the headcount ratio falling from 16.0 percent in 2020 to 12.5 percent in 2021. The trend continued, with further reductions in poverty from 2021 to 2022 in the three countries as employment and income recovery continued. Poverty in Grenada is estimated to be 15.8 percent in 2022 and in Jamaica at 14.3 percent, while it is estimated that 8.5 percent of the population in Saint Lucia was living with less than US$6.85 a day in 2017 PPP in 2022. In all three countries, estimated poverty in 2022 is still higher than before the pandemic, which is in line with the projections for Latin America excluding the Caribbean (World Bank, 2023b). This is especially the case for Grenada and Jamaica; in Saint Lucia, however, the proportion of the population that is estimated to be poor in 2022 is almost the same as it was before the pandemic.

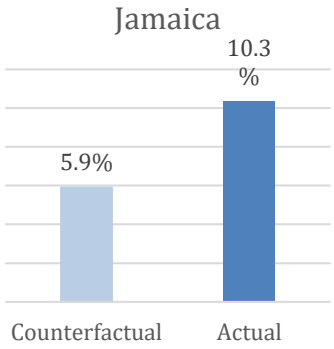
Figure 0.8. Inflation limited poverty reduction in 2022

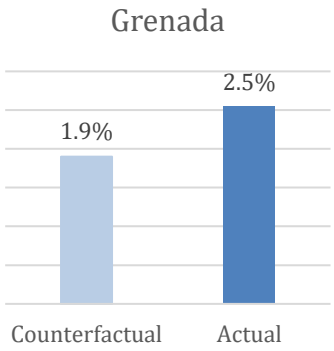
Panel A. 2022 poverty estimates at US$6.85 a day in 2017 PPP

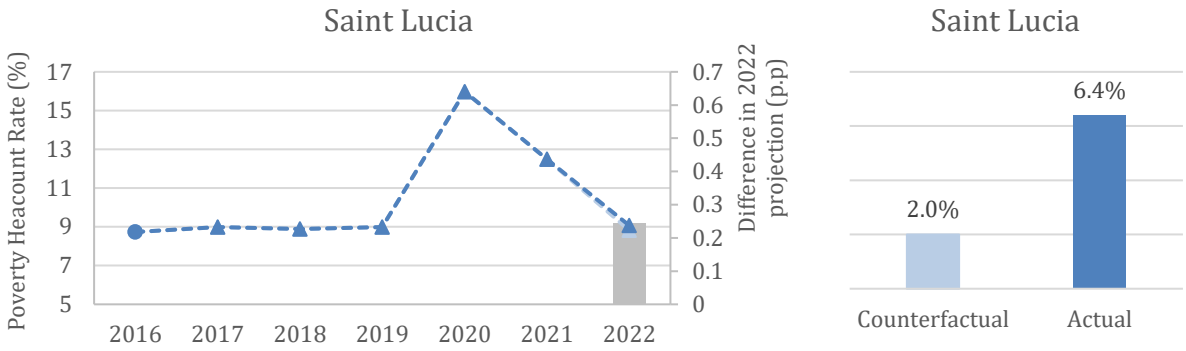




Panel B. 2022 Counterfactual and actual inflation







Source: World Bank staff calculation based on JSLC 2018 and 2021, Grenada SLC-HBS 2018, and Saint Lucia SLC-HBS 2016; CPI data from STATIN and ECCB; macroeconomic indicators from World Bank Macroeconomics, Trade, and Investment Global Practice; and population projections from the UN World Population Prospects. See Annex C for details.
Note: In panel A, estimates from survey data are represented as circles and nowcasts as triangles.

Without the increased inflation catalyzed by Russia's invasion of Ukraine in early 2022, more people would have been lifted out of poverty in 2022. In late 2021, inflation projections did not anticipate the increases seen in 2022. This is illustrated in Panel B of Figure 0.8. Inflation limited poverty reduction in 2022, which contrasts the pre-invasion (October 2021) projected inflation rates with actual inflation rates for Grenada, Jamaica, and Saint Lucia. The former can be seen as counterfactual inflation rates to assess the impact of the 2022 inflation spike on poverty. Poverty estimates using the two inflation rates for each country show that this additional, unanticipated inflation limited poverty reduction. The biggest difference in estimated poverty rates in 2022, amounting to almost 0.6 percentage points, is in Grenada. In Jamaica, counterfactual estimates result in a poverty headcount rate that is 0.4 percentage points below the estimation using actual 2002 inflation, and in Saint Lucia this difference amounts to 0.25 percentage points. Compared to other countries in the LAC region, additional inflation in the Caribbean had a smaller impact on poverty (World Bank, 2023b). Results are, however, not fully comparable due to different estimation approaches, since the welfare aggregate in the other countries in the LAC region is an income welfare aggregate.

IV. Conclusion

This chapter assessed the distributional impact of the inflation spike experienced in the Caribbean in 2022. It finds that fuel, food, and energy price increases were the primary drivers of the inflation spike in 2022. Rising living costs especially for food aggravated food security in the Caribbean, which had already deteriorated during the pandemic. The poor were particularly vulnerable to food price increases, as they allocated a higher share of their budget to food and had limited ability to adapt their consumption patterns. Evidence from an online survey conducted in 2022 indicates that food insecurity affected the population with lower income to a higher degree and resulted in coping strategies that could have negative long-term effects on their welfare. Living cost increases tended to be the highest for the people at the bottom of the welfare distribution, but variation was low, also when compared to other countries in the region for which comparable analyses were conducted. This is because rising fuel and energy prices weighed more heavily on the better-off population and hence counteracted the distributional impact of food price increases. This chapter also shows that the increased inflation catalyzed by Russia's invasion of Ukraine in early 2022 slowed recovery of living standards in the countries analyzed here in 2022.

The findings of this chapter have important implications for policy makers in the Caribbean seeking to mitigate the negative effects of inflation and improving the welfare of their populations. In the short term, social safety nets, such as cash transfer programs can be considered to mitigate the impact of rising living costs on the welfare of the poor and vulnerable and improve their food security. Given the distributional impact of inflation,

with poor and vulnerable households tending to face higher increases in living costs and more adverse effects on their welfare, it is important to consider targeted measures when designing such policies. In the medium to long term, efforts to address some of the underlying factors of living cost increases are important to consider. These include strategies to increase domestic production and diversify energy sources, including the promotion of renewable energy alternatives and energy efficiency. Supporting climate change adaptation efforts in the agriculture sector also can help mitigate the impact of future price increases on food security that are anticipated.

The chapter also highlighted the need for more frequent data collection and dissemination to monitor welfare, assess the impact of shocks on the living conditions of the population, and design targeted policies. Due to limited availability of household data in the Caribbean, this chapter could only assess the distributional impact of the 2022 inflation spike in Grenada, Jamaica, and Saint Lucia. Results can provide important insights for the Caribbean as a whole, but policymakers will need to know what happened in their country. For this, country-level data is needed. Availability of data for a wider set of countries, especially when harmonized, can also allow for comparison and be of value to development partners who need to decide how to allocate resources and set priorities. Finally, when it comes to designing targeted responses to shocks like the recent living cost increases in a particular country, country-specific up-to-date information on household welfare and consumption patterns are key.

Chapter 2. Social Protection and related responses to Inflation in the Caribbean Region

I. Introduction

The predominant policy responses to the inflation crisis in the Caribbean have been subsidies, tax measures, social assistance, labor market programs, social insurance, and trade-related measures, in this order. Social protection and labor measures in the Caribbean cover 15 percent of the total population (weighted average), or about 7 million people, and spending on these programs amounts to roughly US$664 million, or 0.21 percent of the total regional GDP. In the LAC region coverage is higher, with these programs covering 147.9 million people (23 percent of the population) and spending of US$40.8 billion, representing 0.74 percent of the total regional GDP, is also higher than Caribbean region. Subsidies make up 35 percent of the overall response in countries in the Caribbean, close to the 36 percent share in LAC but somewhat higher than the global average for subsidy-based responses of 33 percent of the total.

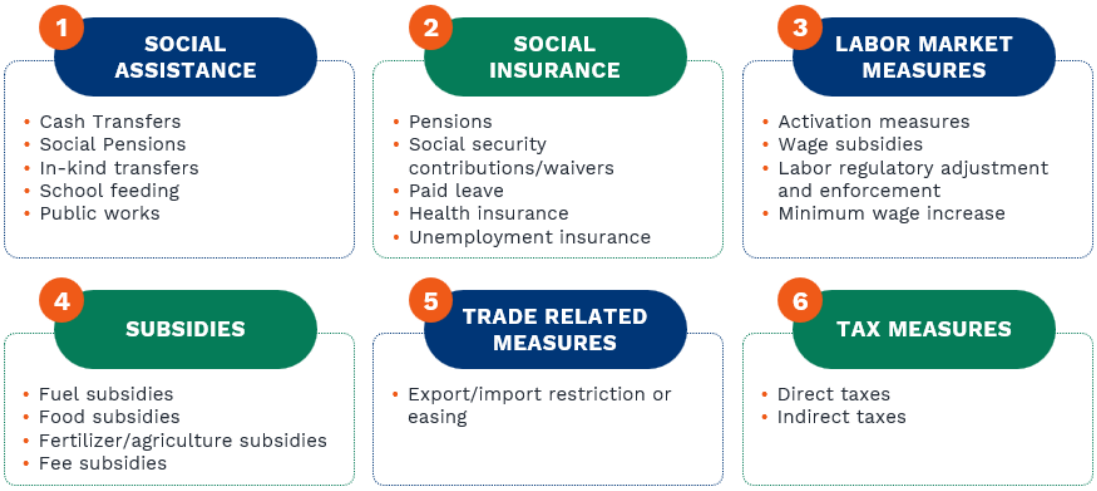
The level of adequacy of social assistance and subsidy programs in the Caribbean region is lower compared to the rest of the world but inertia of policy measures largely remains a concern. The daily average benefit size of US$1.40, equivalent to 14.6 percent of the daily median income in the Caribbean is much lower compared to the rest of the world where the daily transfers per beneficiary on average were $7.0 or 27 percent of the daily median income. As of March 2023, almost half of the measures introduced in response to the inflation spike had no announced duration or end date, a sign that the current crisis could have a long-term impact on policies in the region.

This chapter is structured in four sections. Section I describes the typology of policy responses to inflation in the Caribbean. Section II discusses the coverage of these responses. Section III provides an analysis of the costs and adequacy of responses for countries for which information is available. Section IV presents information on the duration of the programs.

II. Number, composition, and shares of policy measures

The analysis in this chapter is based on data from the World Bank's version 5 of the tracker on Social Protection Reponses to Inflation (Gentilini et al., 2023). The tracker trails six broad measures, namely social assistance, social insurance, labor markets, trade-related measures, subsidies, and tax measures. Figure 0.1 shows the typology and categorization of measures. Subsidies include four subcategories, i.e., fuel, food, fertilizers and agriculture inputs, and fee subsidies. The categories of subsidies such as fee subsidies are related to government measures such as electricity and voucher subsidies provided to citizens to ease the burden of inflation. The tracker captures fiscal and (some) monetary policies announced or implemented to reduce the impact of inflation on consumers. For instance, (unconventional) monetary policies that provide direct transfers or tax relief to the population are part of the stocktaking, while (conventional) monetary measures in terms of interest rates or assistance to firms are excluded. Information on remittances is not included given that the tracker only captures government responses.

Figure 0.1 Typology of Reponses



Source: Authors' elaboration

In the response to the current inflation crisis, 94 different measures were enacted in 23 Caribbean economies.[4] Of these, 35 percent were subsidies, 29 percent tax measures, 22 percent social assistance, 9 percent labor market programs, 4 percent social insurance), and 1 percent trade-related measures (Table 0.1 Number and type of measures and share of totalTable 0.1).

Table 0.1 Number and type of measures and share of total

Component	Caribbean		World	
	No. of measures	Share of total	No. of measures	Share of total
Subsidies	33	35%	439	33%
Social assistance	21	22%	409	31%
Tax measures	27	29%	258	19%
Trade-related measures	1	1%	75	6%
Labor market programs	8	9%	77	6%
Social insurance	4	4%	75	6%
Grand total	94	100%	1,333	100%

Source: Authors' calculations based on Gentilini et. al (2023)

Of the 33 subsidy measures recorded in 18 economies in the Caribbean, 13 were fee subsidies. Of these 13, 10 subsidies aimed at reducing the burden of rising utilities costs (mainly electricity and gas for heating or cooking) and 3 were price controls or health-related subsidies. For example, in December 2022, the government of Grenada

[4] The 23 economies are Anguilla (UK), Antigua and Barbuda, Aruba, The Bahamas, Barbados, Belize, British Virgin Islands, Cayman Islands, Curaçao, Dominica, Dominican Republic, Grenada, Guyana, Haiti, Jamaica, Montserrat, St. Kitts and Nevis, Saint Lucia, Sint Maarten, St. Vincent and the Grenadines, Suriname, Trinidad and Tobago, and Turks and Caicos Islands.t

announced an EC$ 10.00 (East Caribbean dollar) per month subsidy (equivalent to US$3.70) for all residential consumers consuming up to 99 kilowatt-hours (kWh) per month. The subsidies are expected to cost EC$ 2.4 million, or 0.08 percent of Grenada's GDP. In March 2022, the government of Jamaica announced an electricity support subsidy benefiting an estimated 460,000 customers and covering 20 percent of the bill for households consuming 200 kWh per month or less. Another 10 measures are fuel subsidies, 4 of them are price control measures aimed at controlling or freezing the price of fuel at certain target prices and 6 aimed at lowering fuel prices for consumers. The government of Guyana, for example, announced in October 2022 that it would cut the cost of gasoline by 20 percent and diesel by 15 percent by means of a fuel subsidy to the state-owned Guyana Oil Company Limited, the hope being that competitors would then lower their prices. Other measures enacted by countries in the Caribbean included seven food subsidies, five entailing price controls and two general food subsidies. In October 2022, The Bahamas government, for example, announced price controls on 38 staple food products.

Tax measures were the second-most popular inflation response, followed by new spending on social assistance such as cash transfers. Across the region, 15 economies[5] implemented a total of 27 tax measures, all of them indirect tax measures (Table 0.1). For example, the government of St. Vincent and the Grenadines removed the customs tax for cooking fuel for a period of three months starting in May 2022. Social assistance was the next most-utilized measure put into effect, with 10 economies[6] announcing 21 separate social assistance measures, of which 11 were cash transfer programs. The government of Jamaica, for instance, announced in March 2022 that it had set aside a total of J$200 million (Jamaican dollars) to provide one-time grants of J$10,000 to cover food expenses each for the neediest Jamaican families impacted by rising inflation. It then announced in July 2022 that it would spend J$2.7 billion for social intervention including J$361 million for general welfare support for beneficiaries who are not also on the Program of Advancement Through Health and Education (PATH), its CCT program. This amount (J$ 2.7 billion) also included J$100 million for 10,000 social pensioners who are not PATH beneficiaries. The government of Haiti, in another example of this type of inflation response, launched a new temporary, emergency social assistance program in May 2022 to alleviate poverty and increase social inclusion to provide underserved communities with 100,000 in-kind food kits each a month.

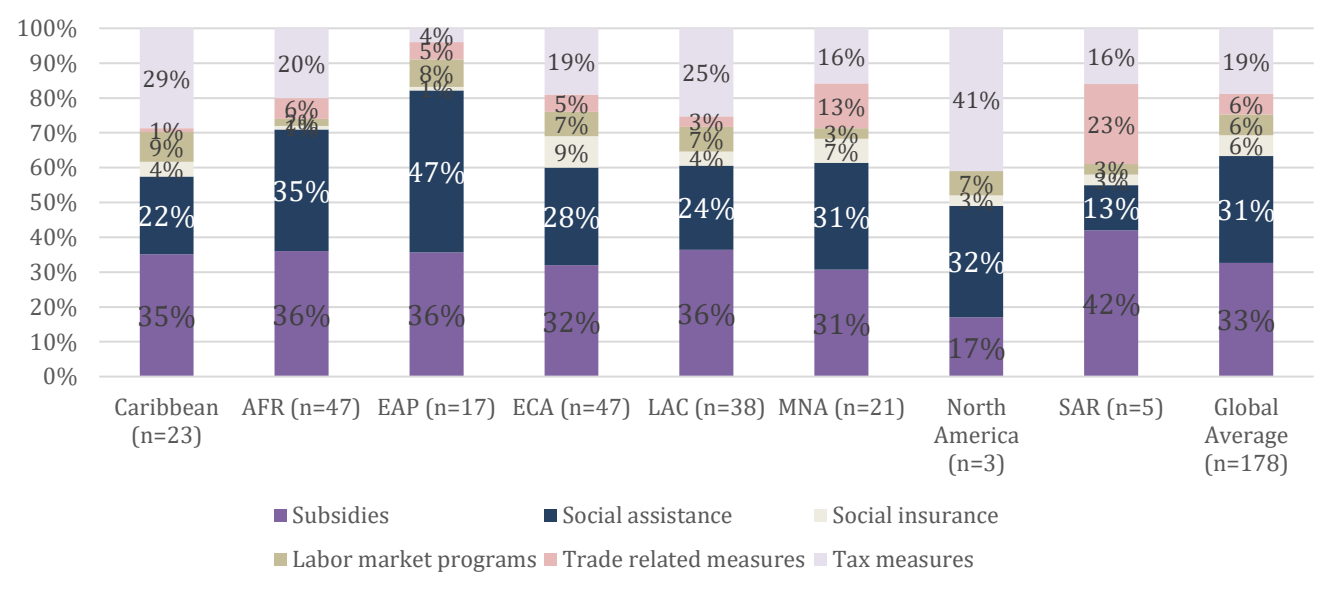
Labor market programs initiated in response to the inflation spike in the Caribbean included minimum wage increases and training, and in some countries, social insurance and trade-related measures were put in place. Two of the eight labor market measures undertaken, in Anguilla (UK) and Saint Lucia, entailed public sector wage increases, and one of these measures was a training program implemented in St. Vincent and the Grenadines. Additionally, the government of Antigua and Barbuda in November 2022 announced an increase in the minimum wage to EC$9 that took effect on January 1, 2023. Other responses included four social insurance measures and one trade-related measure. For example, the government of Jamaica also included in the July 2022 additional social intervention expenditure, J$450 million for 45,000 national insurance system pensioners who receive less than J$15,000 per month.

The composition of policy responses in the Caribbean is similar to that in the LAC region, but social assistance measures constituted a smaller proportion and tax measures a higher proportion of responses than the global average. Subsidies make up 35 percent of the overall response in countries in the Caribbean, close to the 36 percent share in LAC but somewhat higher than the global average for subsidy-based responses of 33 percent of the total (Figure 0.2). Tax measures related to value added tax and income taxes account for 29 percent of responses in the Caribbean against a 24 percent share in LAC and the global average of just 19 percent. Comparing regions, only North America had a higher share of tax measures—47 percent—in its total response. Social assistance

[5] These are Anguilla (UK), Antigua and Barbuda, Barbados, Belize, British Virgin Islands, Curaçao, Dominica, the Dominican Republic, Grenada, Guyana, St. Kitts and Nevis, Saint Lucia, Sint Maarten, St. Vincent and the Grenadines, and Trinidad and Tobago.
[6] These are Anguilla (UK), Barbados, Belize, the Dominican Republic, Guyana, Haiti, Jamaica, Montserrat, St. Kitts and Nevis, and Turks and Caicos Islands.

programs such as cash and in-kind transfers make up a smaller share of the responses in the Caribbean (22 percent) than the global average of 31 percent and the LAC region share of 24 percent. In the North America, East Asia and the Pacific, Africa, and the Middle East and North Africa regions, by comparison, social assistance measures accounted for 41, 35, 31, and 32 percent, respectively, of the policy responses to the inflation crisis. Labor market measures, social insurance, and trade-related responses account for 9 percent, 4 percent, and 1 percent, respectively, of the total Caribbean responses; globally, these each make up 6 percent of the total. The trend regarding social insurance, labor market programs, and trade-related measures in the Caribbean countries was similar to the rest of the world at less than 10 percent of the total responses.

Figure 0.2 Composition of policy responses across regions and globally



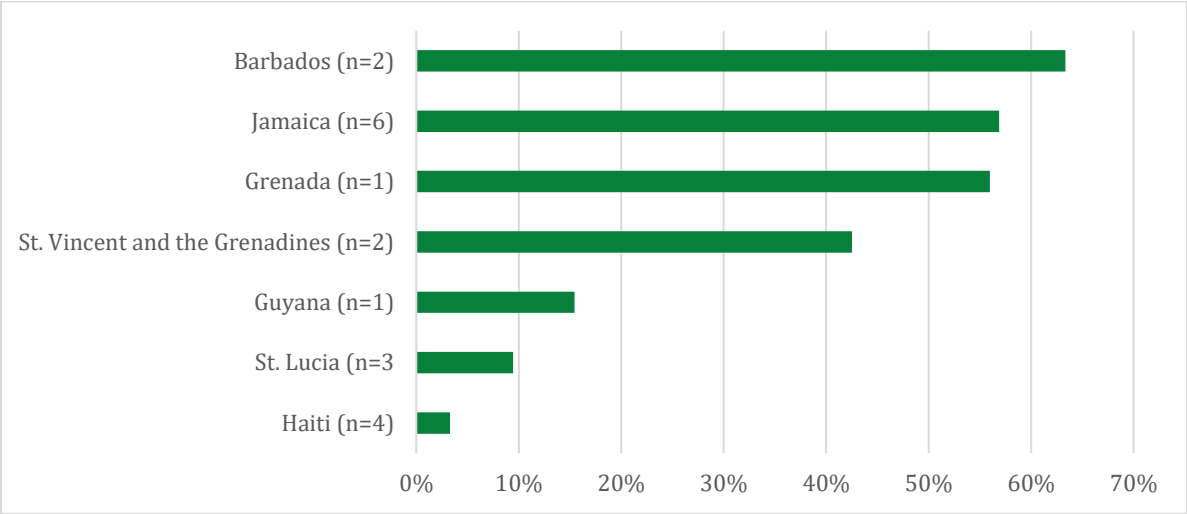
Note: AFR=Africa; EAP = East Asia and Pacific; ECA = Europe and Central Asia; LAC = Latin America and Caribbean; MNA = Middle East and North Africa; SAR = South Asia.

Source: Authors' calculations based on Gentilini et. al (2023)

III. Coverage of social protection and labor programs

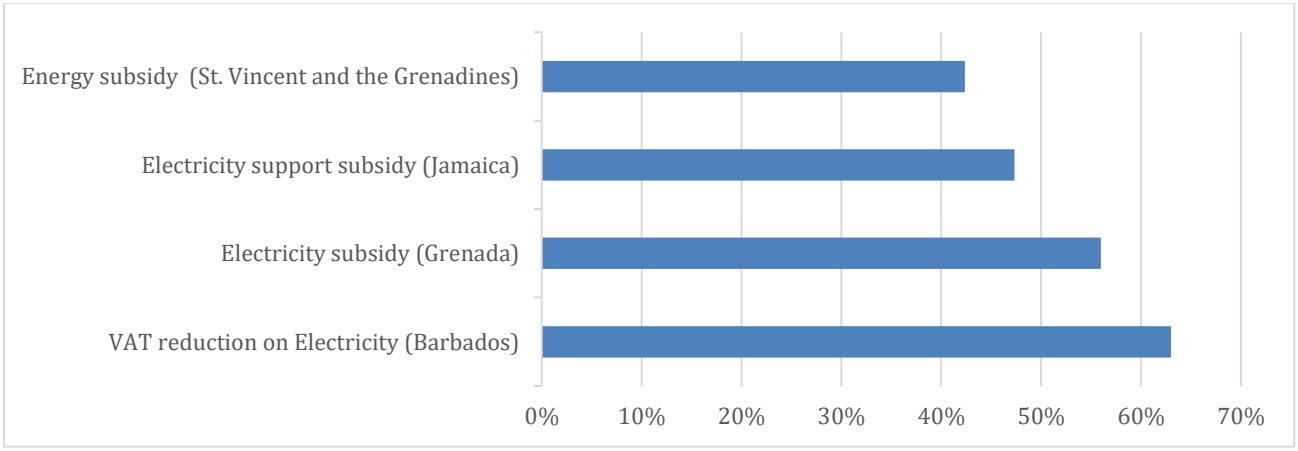
Policy inflation responses cover on average 15 percent of the total population of the Caribbean countries with available information, which is slightly higher than the global average of 13 percent. Coverage of policy inflation responses in Caribbean countries is relatively lower when compared to LAC region (reaching 23 percent of the region population). Coverage of the inflation response measures themselves is less clear as only 24 of the 94 measures announced by Caribbean governments have recorded the planned coverage information. As shown in Figure 0.3, Barbados has the highest percentage of population (63 percent covered, followed by Jamaica with 57 percent, Grenada with 56 percent, and St. Vincent and the Grenadines (43%). Notably, SP and labor programs in Haiti cover just 2 percent of the population. The top three programs in terms of the percentage of the population covered are the Barbados value added tax reduction on Electricity Program (63%), Grenada Electricity Subsidy Program (56%) and Jamaica Electricity Support Subsidy Program (47%) (Figure 0.4).

Figure 0.3 Percentage of population covered by social protection, selected countries



Source: Authors' calculations based on Gentilini et. al (2023).

Figure 0.4 Percentage of population covered by social protection programs (top 4 coverage in Caribbean)



Source: Authors' calculations based on Gentilini et. al (2023)

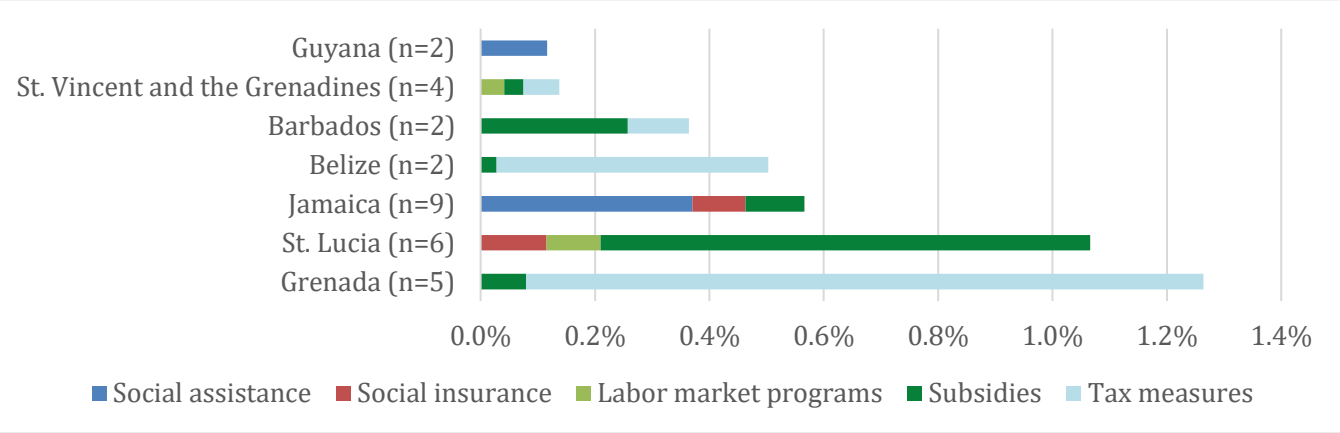
Some inflation responses in the Caribbean region have been large scale and feature quasi-universal targeting. The government of Barbados announced a new package of measures in July 2022 to ease the burden of rising costs, including a reduction in the value added tax on electricity bills from 17.5 percent to 7.5 percent for the first 250 kWh of electricity used. This measure was expected to benefit 63 percent of all households in Barbados and to have cost an estimated BD$10.5 million (Barbados dollars) between August 1st, 2022, and January 31, 2023. In another example, the government of Jamaica in February 2022 approved a 28.5 percent increase in the national minimum wage, from J$7,000 to J$9,000 (for a 40-hour work week); the increase went into effect from April 2022. In March 2023, the government announced a second increase in the minimum wage, to J$13,000, that went into effect on June 1.

IV. Cost and adequacy

The Caribbean region has spent at least US$644 million or 0.21 percent of GDP in responses to the current inflation crisis, although expenditure data are available for only 40 of the 94 measures and 11 out of the 23

economies. Grenada is spending 1.2 percent of its GDP on these responses; Saint Lucia is spending 1 percent, Jamaica and Belize are spending 0.5 percent, and Barbados is spending 0.3 percent of their respective GDP. The spending in Caribbean region is lower than global average. According to data from 143 countries, on average, governments plan to invest 1.06 percent of their GDP in social assistance and subsidies.

Figure 0.5 Program expenditure as % of GDP, selected Caribbean countries

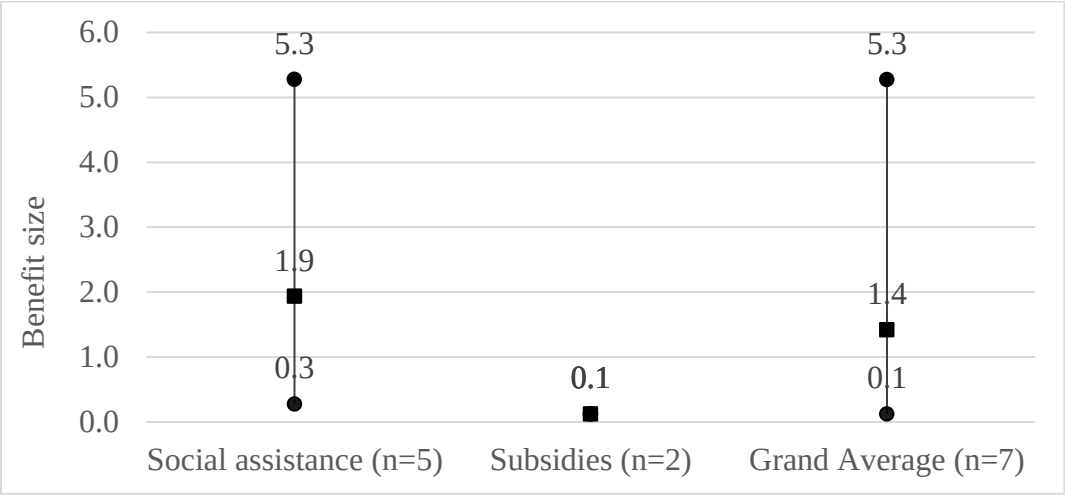


Source: Authors' calculations based on Gentilini et. al (2023).

Data on the adequacy of transfers and size of benefits, while available for just seven programs in the Caribbean region, indicate that the average daily benefit size is US$1.40, equivalent to 14.6 percent of the daily median income. These data relate to programs in five economies only (Figure 0.6).[7] The average daily benefit size in the Caribbean region is smaller than the global daily transfers per beneficiary of US$7.0 or 27.0 percent of the daily median income. Guyana has the highest average daily transfer (US$5.3) among countries with available data in the region. On January 1, 2023, the government of Guyana announced an increase in the old age pension from G$28,000 to G$33,000 (Guyanese dollars), which corresponds to 57 percent of the share of median daily income in the country. At the other end of the scale, the lowest average daily transfer is US$0.1 in Grenada, which plans to give a new utility discount in form of a subsidy of EC$10 a month to an estimated 21,000 low-income households. This discount is set to last for 12 months and will represent 1 percent of the share of daily median income in the country. In the rest of the world, on average, transfer amounts of subsidies have been more generous than social assistance. In the Caribbean, however, the transfers of social assistance programs have been higher than subsidies. An example is the aforementioned temporary emergency social assistance program in Haiti, which gave out cash transfers of G 3,000 (Haitian gourdes) per month to 50,000 families for a duration of three months. In an example of a subsidy transfer, the government of Grenada implemented an electricity subsidy of EC$10 per month for all residential consumers of up to 99 kWh per month.

[7] Dominican Republic, Grenada, Guyana, Haiti, Montserrat (UK)

Figure 0.6 Daily benefit size in Caribbean

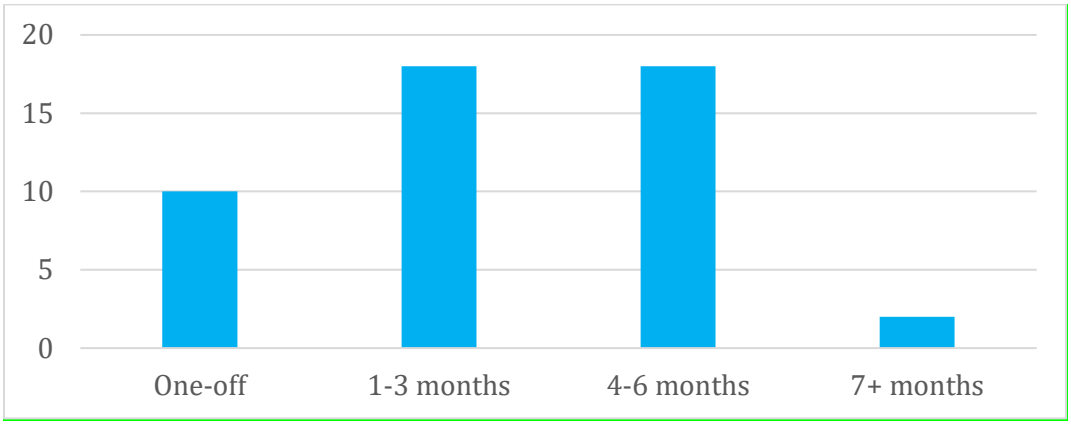


Source: Authors' calculations based on Gentilini et. al (2023).

V. Duration and responses over time

In the Caribbean, duration data are unavailable for nearly half of the crisis-response measures, and another quarter of the measures are one-time measures. The absence of a recorded start or end date for 48 of the 94 programs suggests that the current crisis could have a long-term impact on policies in the region. Another 37 measures are recorded to have already been ended, with 31 measures reported as active and 4 announced but not yet started (Figure 0.7). The measures that have already ended had average duration of 4.1 months; four of those were extended for an average duration of four months. For example, on April 14, 2022, the government of Barbados announced that all customs duties on imports that are above 5 percent would be reduced to 5 percent starting the following day and the reduction would last for three months. On July 22, 2022, it was announced that this measure would be extended for another three months as of July 15, 2022. Another example is a subsidy implemented by the government of Saint Lucia. On September 13, 2022, it approved a 30 percent subsidy on inputs for banana farmers to last from September through December 2022 as a response to the rising cost of production in the industry. This measure was then extended on January 10, 2023. At the same time, 21 percent of the measures announced by Caribbean governments with a specific duration in months are one-time measures (but two of these were repeated for a second time). For example, in May 2022, the government of Guyana announced a one-time CT of G$25,000 to every household in the Riverine and Hinterland communities. Likewise, in July 2022, the Saint Lucia government announced it would provide each pensioner a one-time EC$500 direct deposit to supplement and strengthen their spending power in the face of the rising inflation.

Figure 0.7 Duration of programs



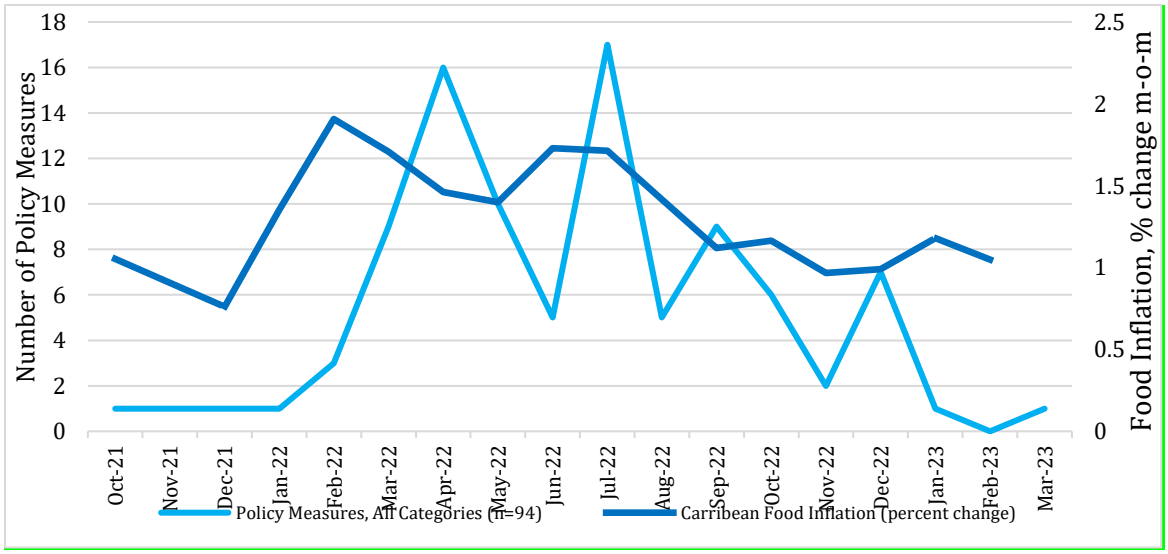
Source: Authors' calculations based on Gentilini et. al (2023).

Note: half of the crisis-response measures are not included as they have no data on start, duration, or end date.

Responses over time

Most of the inflation response measures in the Caribbean went into effect or were announced in mid-2022, though some new measures were introduced in 2023 government budgets. Most of the measures in Caribbean were announced in 2022 between March and May but there was a spike again in July (Figure 0.8). Policy activity has slowed since August 2022 as global food and fuel prices have declined. However, in late 2022 and early 2023, several new mitigation measures were included in new government budgets. One is an increase in the old age pension in Guyana, announced by the government on January 1, 2023, that would raise the benefit for 73,000 elderly from G$28,000 to G$33,000. Likewise, in late December 2022, the government of Belize announced an increase of BZ$5 per hour in the minimum wage for all categories of workers effective from January 1, 2023.

Figure 0.8 Responses over time



Source: Authors' calculations based on the World Bank's version 5 of the tracker on Social Protection Responses to Inflation (Gentilini et al.,20).

Chapter 3. Policy responses to price inflation: Cost and benefits

Introduction

When confronted with the sudden increase in food and energy prices, most Caribbean countries put in place subsidies to mitigate the welfare impact of the inflation on households. This chapter evaluates these policy choices and alternative potential crisis responses, particularly cash transfer programs that could have been both cheaper to finance, more equitable, and less distortive of market signals than subsidies. It analyzes the costs as well as the regressive nature of consumer subsidies, which disproportionately benefit wealthier individuals who typically consume more of the subsidized goods. Using empirical evidence from a case country study of an energy subsidy and simulations of alternative programs, the report analyzes the costs, fiscal savings, and household welfare gains that can be achieved from switching from universal subsidies to universal flat benefit cash transfers and shifting further to targeted cash transfers.

The findings suggest that switching from consumption-based universal subsidies to either universal or targeted flat benefit cash transfers can increase fiscal savings and improve household welfare. Deploying targeted subsidies could achieve significant fiscal savings of up to 45 percent of the cost of a universal subsidy, provided that the subsidized commodity has a market structure that allows the administration of a filter to exclude those households with the highest consumption. Switching from universal subsidies to other compensatory measures such as targeted cash transfers for the poorest half of the population can lead to further fiscal savings of up to 64 percent. Distributional outcomes also improve significantly when switching from consumption-based universal subsidies to either universal or targeted flat benefit cash transfers. Not only are these alternatives less costly than universal subsidies. With shifts to cash transfers, half of the population could see their welfare increasing, with the lowest quintile of the income distribution getting as much as 2.5 times more in terms of benefits than with subsidies. This level of savings and welfare gains suggests there is a high return on proactive investments in an adaptive social protection system that is be better prepared to respond to shocks such as the current inflation surge and any covariate shock.

This chapter is structured in five sections. Section I introduces a generic framework to estimate differences in between subsidies and cash transfers in terms of overall cost, their welfare impact on the poorest half of a country's population, the impact on market signals, and political feasibility. Section II uses Jamaica households survey data, among the most up-to-date microdata available in the region, to quantify these effects based on the electricity consumption pattern of the Jamaican households in 2021. Section III uses the empirical case of a targeted electricity subsidy in Jamaica, which has a well-developed social protection system, and finds that while such a policy would generate large savings, a targeted subsidy also has suboptimal distributional effects while cash transfers supporting a majority of winners are feasible and fiscally sustainable. Section IV discusses the political economy factors around subsidy reforms and how they can be turned around in favor of cash transfers. The analysis in the chapter supports a conclusion that there are very large returns on investments in adaptive social protection systems that help governments prepare for and respond to shocks with cash transfers.

I. Framework to compare the cost and distributional outcomes of inflation mitigation measures

This chapter uses a framework that compares the cost and distributional effects of subsidies and SP measures. The methodology involves estimating the cost of various mitigation measures and households' welfare using micro-level household survey data. Using these estimates, a ranking based on cost savings and household distributional outcomes is produced. Box 3.1 and the accompanying Figure 3.1 compare four of the most common mitigation measures: (i) a general subsidy for all consumers of a specific commodity that is important for households' consumption (such as energy); (ii) a universal cash program with flat benefit; (ii) an almost universal

cash program with a flat benefit, with eligibility restricted by an administrative filter or affluence test;[8] and (iv) a targeted cash transfer program that covers the poorest half of the population. International evidence shows that subsidies disproportionately benefit wealthier households while also leading to economic inefficiencies (Clements et al., 2013). Given the predominance of subsidies in Caribbean countries' inflation response measures, this, this chapter also examines the regressivity of subsidies in the context of the Caribbean, compares them with alternative social protection measures, and answers the following questions: How big are the potential cost savings of switching to an alternative SP measure and what would the distributional effects and the welfare gains be for the five poorest deciles of the population?

The mitigation measures considered are selected based on their capacity to be deployed quickly to respond to a covariate shock and to cover a large share of the population. The choice to examine energy subsidies reflects their prevalence among the measures taken in 2022 and 2023 by the Caribbean governments to respond to inflation.[9] The simplest SP program alternative to energy subsidies would be a universal flat benefit program for all individuals in a country similar to a universal benefit income (UBI) program. A UBI offers the same benefit to all individuals in a group or a country (Gentilini at all, 2020). Alternatives with less-than-universal coverage are considered as well because they would cost less.

Box 3.1: Comparing the cost and benefits of most common inflation mitigation measures

The framework assumes that a spike in inflation—for example, an increase in energy prices (fuel or electricity)—will reduce the welfare of the consumers proportional with the increase in the commodity price and with the quantity consumed. As shown in Figure 3.1, the cost to households of a x percent increase in the price of electricity will be a loss of welfare that equals OH for the poorest consumer, BG for the median consumer, and JE for the wealthiest consumer. A government that wants to preserve the purchasing power of the households could institute a universal subsidy of x percent of the electricity bill to fully mitigate the price shock. But the government also has a number of other policy options apart from this universal subsidy that could both reduce the fiscal cost and improve the welfare impact of its actions.

The World Bank staff simulations of alternative policies focus on preserving the welfare of the median consumer, which is essential if the options are to have the necessary political support. This means ensuring that on average, 50 percent of the population will gain from more from the alternative policies or programs than from the universal subsidy.

[8] In the SP literature, this type of filter is called an "affluence test" because the program does not try to target the poorest households but aims only to filter out the wealthiest individuals. The specifics of the affluence test will vary across countries but in general will rely on administrative data on formal incomes, on business ownership and owners from a trade registry, or on high-value assets (such as yachts, high-value dwellings, possession of multiple dwellings, cars, etc.).

[9] The Caribbean countries have implemented eight fuel and/or energy subsidies and three food subsidies.

The following policy options were simulated:

(i) **A universal subsidy (US) that fully compensates the increase in the price of energy**. If the price of energy increased by x percent, the subsidy will compensate x percent of the price or, equivalently, x percent of the energy bill. As the consumption of energy increases significantly with income, wealthier consumers will capture more of the subsidy than poorer consumers. The level of subsidy received by households is illustrated by the curve HBJ. The total cost of the US is the area HBJEO. The median consumer will receive a subsidy equal with BG.

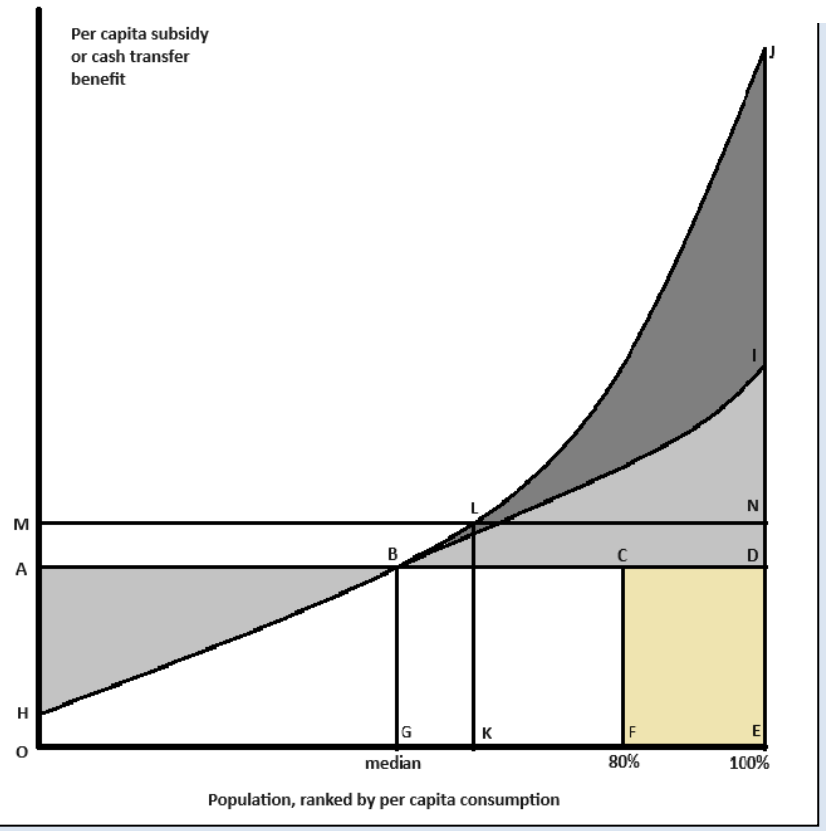
(ii) **A universal cash transfer, with a flat benefit level equal to the average per capita cost of the subsidy (CT1)**. This option will have the same coverage and the same cost as the universal subsidy. However, the level of compensation will be decoupled from the quantity (of energy) consumed by the household. The benefit level of the cash transfer program will be LK (or MO), and all households receive the same per capita amount. The total cost of the program is the area under the MLN line or area MNEO.

(iii) **A universal cash transfer with a flat benefit level equal to the median per capita cost of the subsidy (CT2)**. This program will have the same coverage as the universal subsidy but a lower cost than either the US or CT1 (as the median per capita subsidy is lower than the average per capita subsidy). The benefit level of the cash transfer program will be BG (or AO); all households receive the same per capita amount. The total cost of the program is the area ADEO. This measure will generate more savings for the government than the universal subsidy. For the wealthier 50 percent of the population, the CT2 will cost less than the US with the area BJD. For the poorest 50 percent of the population, the CT2 will cost more than the US with the area ABH. The light gray areas ABH and BID are equal. Hence, the net savings of CT2 compared to US is the area BJI (dark gray).

(iv) **A targeted cash transfer that has a flat benefit level equal to the median per capita cost of the subsidy and covers only the poorest 80 percent of the population (CT3)**. This cash transfer excludes the wealthiest quintile of the population who can afford to pay the higher prices. The eligible population will be segment OF (all households except those in the wealthiest quintile). The cost of the program will be the area ACFO. This program, which filters the affluent households, will generate greater savings than CT2, with savings equal to area CDEF (yellow).

(v) **A targeted cash transfer that has a flat benefit level equal to the median per capita cost of the subsidy and covers the poorest 50 percent of the population (CT4)**. CT4 will leave the 50 percent better-off individuals to cope with the price increase. This cash transfer will use a form of welfare-based targeting to identify the poorest 50 percent such as a proxy means test (PMT), hybrid means testing (HMT), or means testing (MT). The eligible population will be segment OG, and the cost of the program will be the area ABGO. Compared with the CT3, this program will generate additional savings equal to area BCFG. Predictably, its cost will be only half that of the CT2.

Figure 0.1 **Cost and distributional effects of five types of mitigation measures: universal subsidy, universal cash transfer programs, and targeted cash transfer programs**



The cost of the inflation mitigation measures is highest for subsidies, less for universal cash transfer programs, and still less for targeted cash transfer programs. From a distributional point of view, these measures will also rank in the same order, from the most regressive (US) to the most progressive (CT4). This ranking will likely hold in every country, but the magnitude of the costs and of the welfare gains for the poorest will differ.

The framework takes into consideration that switching from subsidies to SP measures involves political economy trade-offs. Given that subsidies are popular and generally benefit many people, it is key to ensure that whatever policies are being considered have a common objective—namely, to preserve the welfare of the median household. The median household is often associated with the median voter often mentioned in political economy analyses. Therefore, the simulated subsidy reform options addressed in this chapter are calibrated to protect these median voters by providing them at least the same level of benefit that a subsidy would give. This is to ensure that any subsidy reform has sufficient support.

II. Universal subsidies versus cash transfers

This section simulates the cost and distributional impact of a hypothetical universal electricity subsidy and of three relatively simple cash transfer programs with varying levels of coverage and benefit in line with the framework. To simulate and compare subsidies and cash transfer programs with different coverage, recent microdata on the consumption of subsidized goods are required. The data considered to inform the hypothetical programs are drawn from the 2021 Jamaica Survey of Living Conditions (JSLC) as Jamaica has the most recent data of the three Caribbean countries with available microdata. Box 3.2 outlines how and what JSLC 2021 data were used.

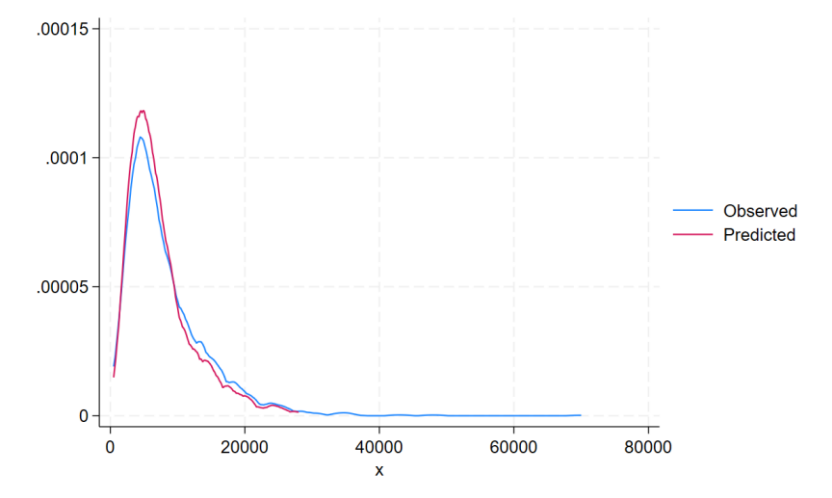
Box 3.2: Using the JSLC data to analyze subsidies as a mitigation measure

The analysis in this chapter uses the microdata of the harmonized version of the JSLC 2021 as of July 26, 2023. The data cover 6,200 individuals living in 2,187 households. The survey includes information on a household's source of energy and the amount of monthly bills. All amounts are expressed in 2017 PPP US dollars. The welfare aggregate used to assign individuals to decile and quintile is monthly per capita expenditure excluding durable goods.

Nearly 28 percent of respondents who reported electricity from the grid as their main source of lighting also reported making zero expenditures on electricity in the latest electricity bill. It is assumed that these respondents misreport their electricity expenditures, which could limit the distributive analysis. For these customers, the missing consumption was computed using a regression model that predicts monthly electricity consumption based on the overall level of consumption, household size, housing characteristics, and a set of dummy variables indicating possession of durable goods that require electricity. A simple model was used to impute missing observations. Generally, the model performed well in predicting the mean and reasonably well in predicting the distribution (Figure 3.2).

The estimated electricity expenditures and related subsidy use both the reported and imputed electricity bill for all households connected to the grid. To ensure comparability with the actual targeted subsidy implemented by the government of Jamaica, the same subsidy rate of 20 percent of a consumer's bill was used. In Jamaica, the government announced on March 17, 2022, an electricity subsidy for an estimated 460,000 households amounting to 20 percent of the monthly bill for all households that consumed less than 200 kWh per month, or roughly 80 percent of the customers. The subsidy was in place from April to July 2022. This section simulates a hypothetical universal electricity subsidy compared to different cash transfer programs. The actual targeted subsidy implemented by the government of Jamaica is analyzed in section III.

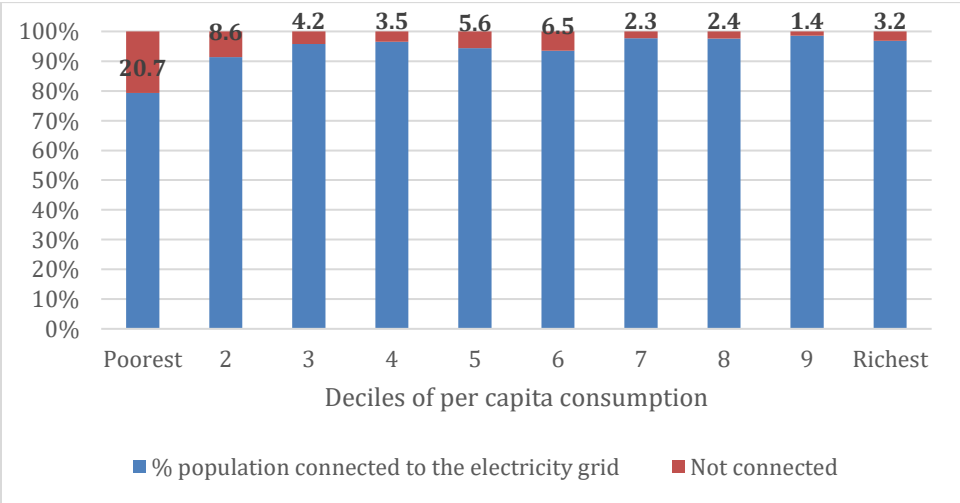
Figure 0.2 Distribution of electricity bills in Jamaica, actual and estimated



Source: Authors' calculation based on JSLC 2021.

A universal subsidy is one of the simplest and fastest policy responses to mitigate the impact on households of rising energy prices but some of the poorest individuals may be left out, by design. For instance, access to electricity is almost universal in Jamaica except in the poorest quintile. While 96.8 percent of the wealthiest individuals (decile 10) live in households connected to electricity, this is the case for only 79.3 percent of the poorest individuals (Figure 0.3). Very few households in the upper deciles reported using alternative energy sources such as solar or wind for lighting, and 15 percent of those in the poorest quintile reported using either kerosene, other sources, or none for this purpose. By design, some of the poorest individuals were excluded from the recent subsidy, but most of the population (95 percent) had access to the subsidy in principle.

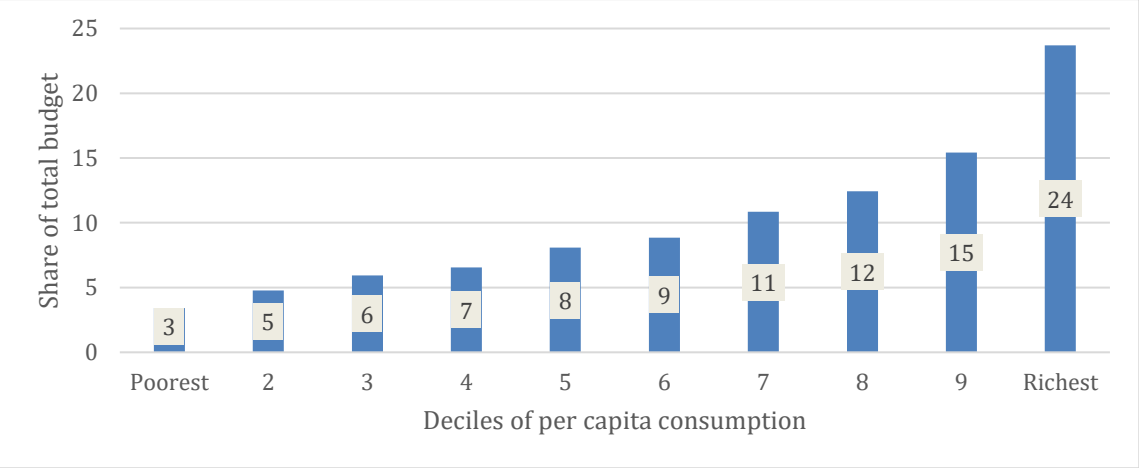
Figure 0.3 Access to electricity from the grid, by welfare deciles, Jamaica, 2021



Source: Authors' calculation based on JSLC 2021.

In general, universal energy subsidies are both costly and regressive. A universal electricity subsidy that reduces the bills of consumers by 20 percent, for instance, would cost the government of Jamaica US16.0 million in 2017 PPP (based on an estimated monthly electricity expenditure of US$80.2 million in 2017 PPP). The estimated cost of this hypothetical subsidy introduced in this chapter is estimated based on the consumption reported by households in the JSLC 2021. As shown in Figure 0.4., this universal subsidy would be regressive. The households in the richest decile get an electricity subsidy that is about 6.9 times larger than the subsidy received by those in the poorest decile: 3.4 percent of the total for the poorest decile versus 23.7 percent of the total for the richest decile. The average does not take into account those households that are not connected to the grid and hence do not have electricity expenditures. Were these taken into account, the difference between the richest and poorest deciles would be even bigger.

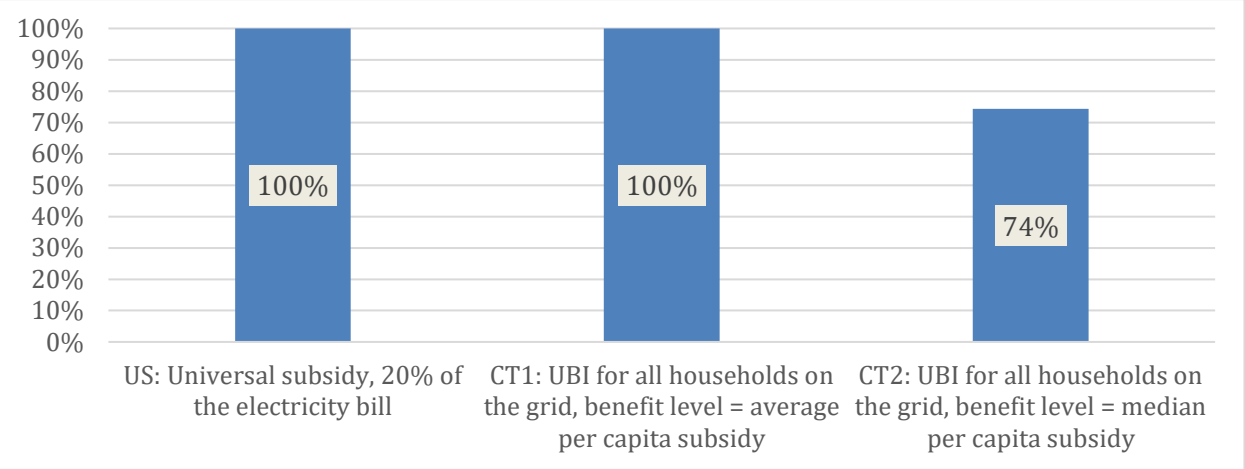
Figure 0.4 Shares of a hypothetical universal electricity subsidy by deciles



Source: Authors' calculation based on JSLC 2021

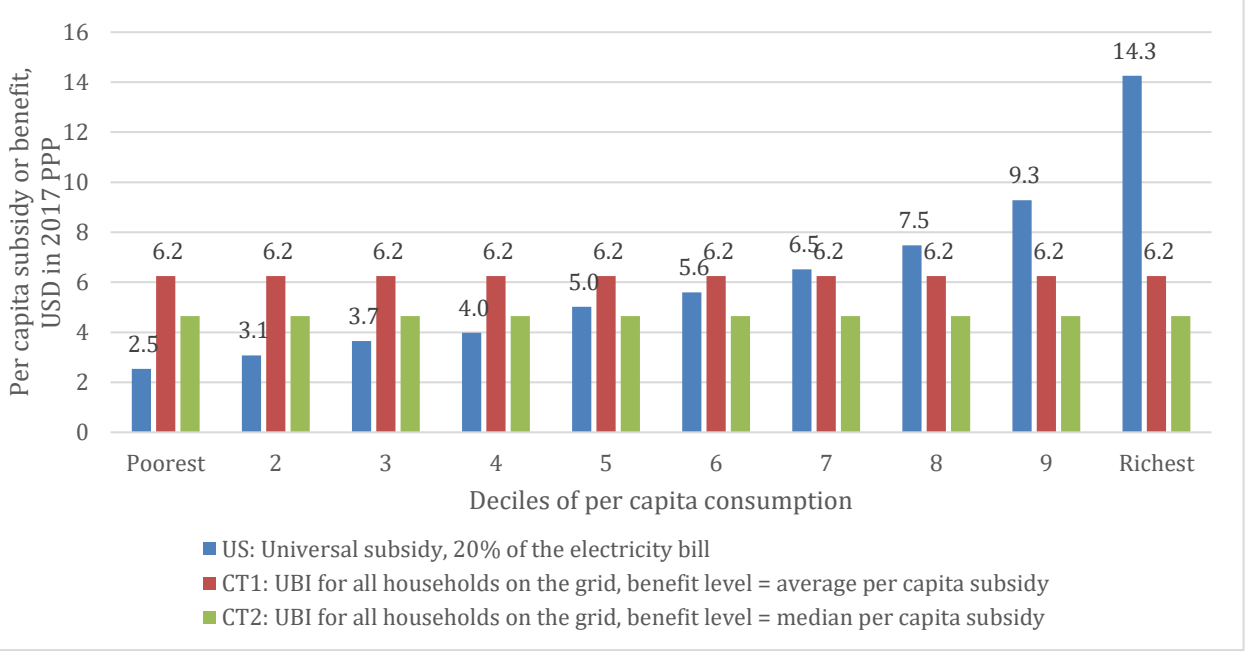
If a government wants to cover all households connected to the grid, it could provide them an equal per capita cash transfer or voucher and, depending on the level of benefit, redistribute the budget or achieve fiscal savings. Cash transfer programs use the simple design of a UBI. Figure 0.5, considers the choice between the US and two forms of cash transfers: a CT program with a benefit level equal with the average per capita subsidy of US$6.20 in 2017 PPP (called CT1 in this section for clarity) or a CT program with a benefit level equal with the median per capita subsidy of US$4.65 in 2017 PPP (CT2). The cost of the CT1 program will be equal to the cost of the subsidy (i.e., there will be no fiscal savings), while the CT2 program will only cost US$11.9 million in 2017 PPP, or 74 percent of the cost of the universal subsidy.

Figure 0.5 Comparing the cost of a universal subsidy with two alternative CT programs with the same coverage (all population connected to the grid)



Both UBI programs are more equitable than a subsidy and both generate enough winners to garner sufficient political support for the measure. The population covered by both the subsidy and UBI programs is the same. But the improvements in equity derive only from the benefit schedule, which is more progressive in the case of the UBI programs. This is illustrated in Figure 0.6. The CT1 cash transfer program, in contrast to the universal subsidy, offers a benefit equal to the average per capita subsidy and transfers on average 2.5 times more resources to the households from the poorest decile; this is equivalent to subsidizing 49 percent of these households' electricity bill. For the households in the richest decile, the transfer would be smaller than the subsidy (about 44 percent of the subsidy), equivalent to a subsidy rate of 9 percent of the electricity bill. On average, the CT1 program will offer a higher benefit to households from the six poorest deciles, a similar average level of protection for households in decile 7, and lower protection for households in deciles 8–10. The cash transfer CT2 program, offering a smaller benefit equal to the median per capita subsidy, still transfers more resources than a subsidy to 50 percent of the population, thus ensuring enough reform winners for this cheaper alternative.

Figure 0.6 CT programs with a flat benefit level are more progressive than a universal subsidy

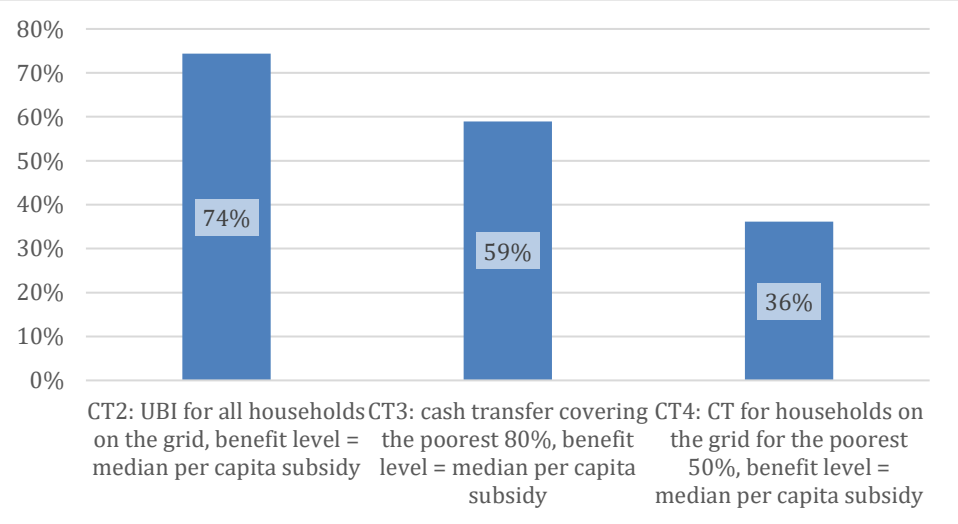


Source: Authors' calculation based on JSLC 2021.

In addition to being more equitable, a flat per capita transfer will strengthen the incentives to use less electricity. Since the level of compensation – a flat per capita CT – does not depend on the level of consumption, households will be incentivized to conserve electricity since lower electricity consumption will translate into savings without a reduction in the cash transfer benefit, which is not the case with a subsidy. Subsidies distort energy markets by encouraging excessive consumption overall while shifting demand toward subsidized products and away from those products whose prices better reflect real market conditions (Adler, 2016).

With finer targeting and switching from a UBI program to targeted programs, any government could have reduced the cost of compensating the customers further. To simplify the simulations, the analysis assumes perfect targeting and no marginal administrative costs. Figure 0.7 compares the cost of three programs that feature the same benefit level that is equal to the median per capita subsidy but have different coverage, relative to the universal subsidy. Predictably, the cost of the programs, relative to the universal subsidy, ranges from 74 percent for the UBI to 59 percent for a CT program covering the poorest 80 percent of the population and 36 percent for CT programs covering the poorest 50 percent. This level of fiscal savings suggests there is a high return on investments in an adaptive social protection system that is prepared to respond to inflation shocks or other covariate shocks in the future, as shown later in chapter 4. All three of the CT programs shown in Figure 0.7 **Error! Reference source not found.**transfer more resources, on average, to the poorest 50 percent of the population, a factor that could win political support for these options.

Figure 0.7 The cost of cash transfer programs relative to the universal subsidy (assuming the same benefit that equals the median per capita subsidy)



Source: Authors' calculation based on JSLC 2021.

The CT programs will only be attractive to policymakers if they can be implemented with the ease and speed of an electricity subsidy. Countries could implement a simple UBI (universal cash transfer or flat benefit)—calibrated for the average or the median per capita subsidy (i.e., the programs labeled CT1 and CT2 in Figure 0.6)—relatively easy by collecting information on the household size from the customers of the electricity parastatals or by merging this information from civil registry statistics using name and address for matching. To reduce the coverage of a CT program from 100 to 80 percent (i.e., for the program labeled CT3 in Figure 0.7), the governments could use an affluence test to exclude the population with the highest incomes and assets. For a CT program covering the poorest 50 percent of the population on the grid (labeled CT4 in Figure 0.7), a government could have used existing proxy means testing (PMT) for ongoing targeted programs and adjusted their eligibility threshold. For

instance, the government of Jamaica could have used the same PMT that is used for the PATH, its conditional CT program, but with a higher threshold to allow 50 percent coverage.

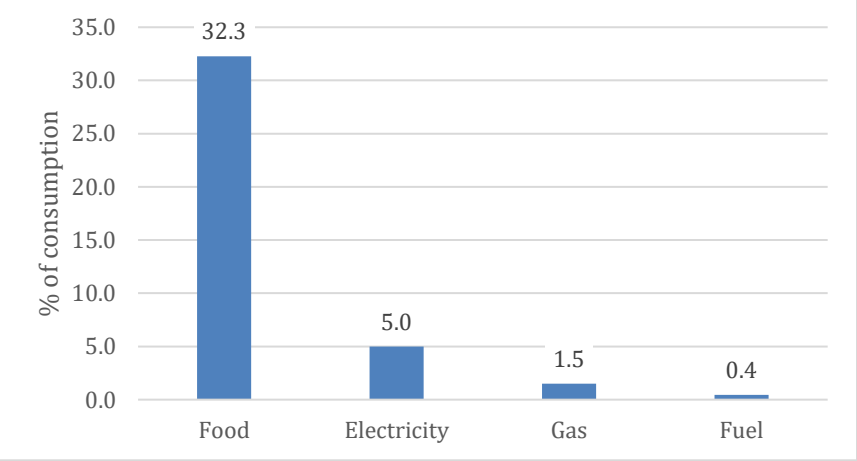
Administrative costs per capita for large coverage cash transfers, considered as feasible alternatives to subsidies, are much smaller than those for targeted cash transfer programs covering a small fraction of the population. Filtering out 20-25% of the better-off is in general simpler than targeting the poorest fine or ten percent of the population. To allow these programs to be deployed quickly during crises, the design parameters should have been calibrated proactively before the crisis hits together with adjustments in the delivery systems to register a larger segment of the population in a relatively short time. Chapter 4 presents several options countries may consider for strengthening their social protection delivery systems, from needs assessment to registration, and to payment of benefits. Lack of preparedness results in a slower response time.

III. Targeted subsidies and cash transfer programs in response to inflation: the case of Jamaica

This section compares a targeted electricity subsidy implemented in 2022 by the Government of Jamaica to welfare targeted subsidies and targeted cash transfers, using the framework outlined in Box 3.1.

The 2022 inflationary pressures in Jamaica were particularly high for food and energy. As shown in Figure 0.3 in Chapter 1, the prices in Jamaica for food and beverages increased by 12.8 percent and for housing and energy by 7.7 percent year on year. These commodity groups were very important in the consumption basket of the average consumer, together representing almost 40 percent of total consumption for median decile (Figure 0.8). For all these goods, there are relatively large differences in per capita consumption patterns between the richest and the poorest decile. This suggests that the impact of inflation would be more pronounced for the most vulnerable groups. In the first decile, foodstuffs make up 45 percent of the household budget against 27 percent in decile 10. The difference is similar in electricity, which accounts for 8.6 percent of the household budgets of the poorest decile and 4 percent in the wealthiest, and to a lesser extent evident in the relative weight of gas costs in budgets.

Figure 0.8 Commodities affected by inflation as a share of average consumption basket, Jamaica, 2021



Source: Authors' calculation based on JSLC 2021.

The government of Jamaica was well prepared to respond expeditiously to the surge in living costs, launching a series of measures to manage inflation and mitigate its impact on the well-being of households, particularly low-income and middle-income households. These rightly focused on food and electricity, the commodity groups that had the largest weight in their consumption baskets. Jamaica mitigated the food inflation by using several CTs programs already in place, with relatively good registries. In particular, the flagship PATH program has enabled the rapid and timely deployment of temporary targeted cash transfers through its vertical expansion (Box 3.3).

Box 3.3. Jamaican government policy responses to food inflation in 2022

To alleviate the impact of rapidly rising food prices, the government of Jamaica deployed a series of conditional and unconditional cash transfers and increased the minimum pension and the minimum wage. Measures announced in 2022 include:

- Topping up the conditional CTT program for eligible beneficiaries. Back to school grants were offered into beneficiary students under the PATH. Over 150,000 beneficiary students in primary and secondary schools are to receive J$10,000 (Jamaican dollars) in added benefits, provided by the SERP in addition to the annual PATH back to school grant of J$3,500 (Jamaica dollars) per beneficiary student. The Ministry of Labour and Social Security delivers the back-to-school grants to eligible families with the regular bi-monthly PATH payout, which began by the end of August.[10]
- Providing unconditional transfers in the form of a one-off grant for the neediest Jamaican families who were not under the regular CCT program PATH. On July 5, 2022, the government announced J$2.7 billion of additional social intervention expenditure that is expected to benefit 18,900 families, including an allocation of J$189 million through the Constituency Development Fund, for welfare and economic enablement activities. Each member of Parliament was asked to identify 300 constituents in each of Jamaica's 63 constituencies who are facing economic hardship and who are not beneficiaries under the PATH.[11]
- Increasing minimum pensions. The additional social intervention expenditure also included an allocation of J$450 million for 45,000 pensioners in the national insurance scheme who receive pensions of less than J$15,000 per month.[12]
- Increasing social pensions. The government allocated J$100 million to cover an additional 10,000 social pensioners who are not PATH beneficiaries.[13] Persons 75 years or older whose applications are accepted were to receive a check every two months for J$ 6,800. The original program was COVID-19 related, whereas the horizontal expansion is in response to cost-of-living crisis.[14]
- Increasing the minimum wage. On February 1, 2022, the cabinet approved a 28.5 percent increase in the national minimum wage, effective April 1, 2022, from J$7,000 to J$9,000 per 40-hour work week. The minimum wage was increased to J$13,000 per week as of June 1, 2023.[15,16]

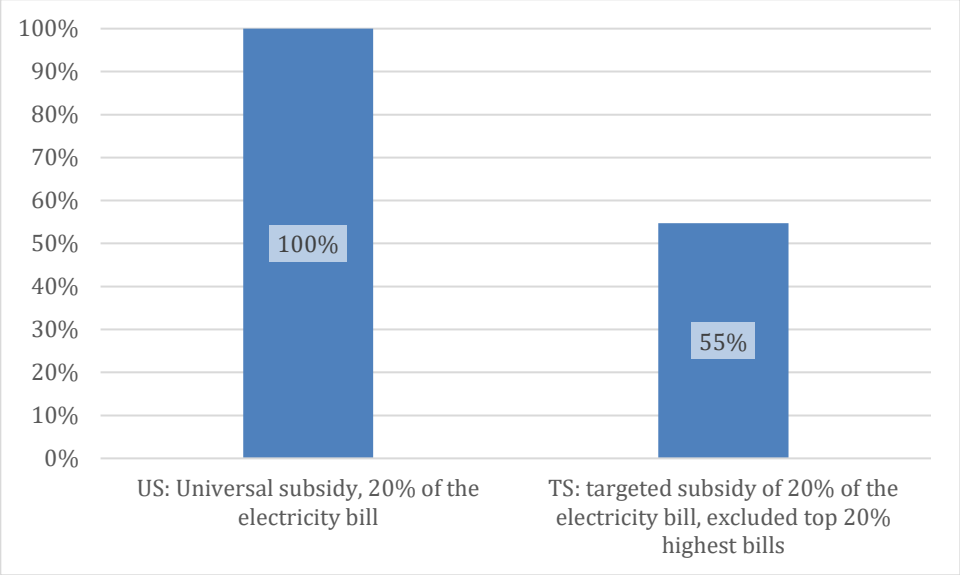
While its policy measures focused on food inflation were narrowly targeted toward the poor, the government of Jamaica's electricity subsidy focused on a broader target group including both the poor and the middle class. Electricity is consumed by 95.5 of the population and represents about 5 percent of households' consumption. The targeted subsidy differed from the universal subsidies implemented in some other Caribbean and LAC countries to mitigate energy price shocks. The households with high electricity consumption (and hence high bills) were excluded (see Box 3.2). The households benefiting from the targeted subsidy represented roughly 80 percent of the electricity utility customers, or about 75% of the total population.

The measure had the advantage of speed and simplicity and achieved substantial fiscal savings compared to an universal consumer subsidy. The targeted subsidy was applied two weeks after the government announced it. The selection of the beneficiary households relied on a simple exclusion filter based on the level of electricity consumption of the electricity account holders, information that the Jamaica Public Service Co Ltd already possessed and could rapidly act upon. Moreover, the simulated monthly cost of the targeted subsidy amounts to

[10] https://mlss.gov.jm/news/2-billion-payout-by-the-ministry-of-labour-and-social-security-in-back-to-school-grants-to-path-beneficiaries/
[11] https://www.mlss.gov.jm/news/189million-payout-by-the-ministry-of-labour-and-social-security-under-serp/
[12] https://www.jamaicaobserver.com/latest-news/clarke-announces-2-7b-in-additional-social-intervention-expenditure/
[13] https://www.jamaicaobserver.com/latest-news/clarke-announces-2-7b-in-additional-social-intervention-expenditure/
[14] https://jis.gov.jm/features/govt-ramping-up-social-pension-programme-beneficiaries/ 2. https://opm.gov.jm/news/government-providing-targeted-support-to-jamaicans-who-need-it/
[15] https://jis.gov.jm/house-approves-minimum-wage-orders/
[16] https://mlss.gov.jm/news/national-minimum-wage-increase-approved/ 3. https://jis.gov.jm/national-minimum-wage-moves-to-13000-june-1/

US$8.8 million in 2017 PPP,[17] significantly less than a universal subsidy with the same subsidization rate of 20 percent that covers all customers (which would cost US$16.0 million in 2017 PPP). In relative terms, the targeted subsidy cost was only 55 percent of what a universal subsidy would cost, as illustrated in Figure 0.9.

Figure 0.9 Relative cost: Universal versus targeted subsidy, Jamaica, 2022



Note: The figure assumes that the universal subsidy is received only by households connected to the grid.
Source: Authors' calculation based on JSLC 2021.

While Jamaica's targeted subsidy brought fiscal savings, it excluded many less well-off households and included many wealthier individuals. The substantial budgetary savings aside, it is worthwhile to explore how effective and fair the targeting mechanism of the subsidy was.[18] The simulation assumed that by excluding the high-consuming electricity households, the government intended to cover the households connected to the grid in deciles 1 through 8. A comparison of the coverage of the targeted and (simulated) universal subsidy (Table 0.1) shows that the government subsidies managed to cover 76 percent of individuals (about what the program initially intended) but failed to exclude the population in the richest two deciles. The inclusion error is quite significant. About 48 percent and 31 percent of the population in the richest two deciles, respectively, benefited from the targeted electricity subsidy. As for exclusion error, only 79 percent of the population in the poorest decile is supported by the subsidy, mainly due to the lack of access to the grid for one in five households from the poorest decile. An alternative universal flat benefit cash transfer would have compensated the households not connected to the grid. Overall, apart from the lack of access to the electricity grid, the targeted subsidy has very low exclusion errors for the population in deciles 1 through 5 (50.0 percent) and moderate exclusion errors for the population in deciles 6 (11 percent), 7 (18.5 percent), and 8 (23.2 percent). The last two lines of Table 0.1 give the exclusion and inclusion error by decile. Exclusion error is calculated as the difference between the population connected to the grid and those benefiting from the actual targeted subsidy in deciles 1 through 8.

[17] This policy has been simulated using the JSLC 2021, excluding the 20 percent of the households that are connected to the grid with the highest bills.
[18] Intuition would suggest that the targeted electricity subsidy would be horizontally equitable if the entire population were connected to the power grid, and if there was a perfect correlation between electricity consumption and household income level.

Table 0.1 Share of population covered by a targeted versus universal subsidy, exclusion and inclusion error by decile

	Total	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10
Targeted subsidy (Jamaica)	75.8	79.1	90.3	93.3	92.4	87.9	82.5	79.1	74.4	47.9	30.9
Universal subsidy (connected to the grid)	94.2	79.4	91.4	95.8	96.5	94.4	93.5	97.7	97.6	98.6	96.8
Exclusion error		0.3	1.1	2.5	4.0	6.5	11.0	18.5	23.2		
Inclusion error										47.9	30.9

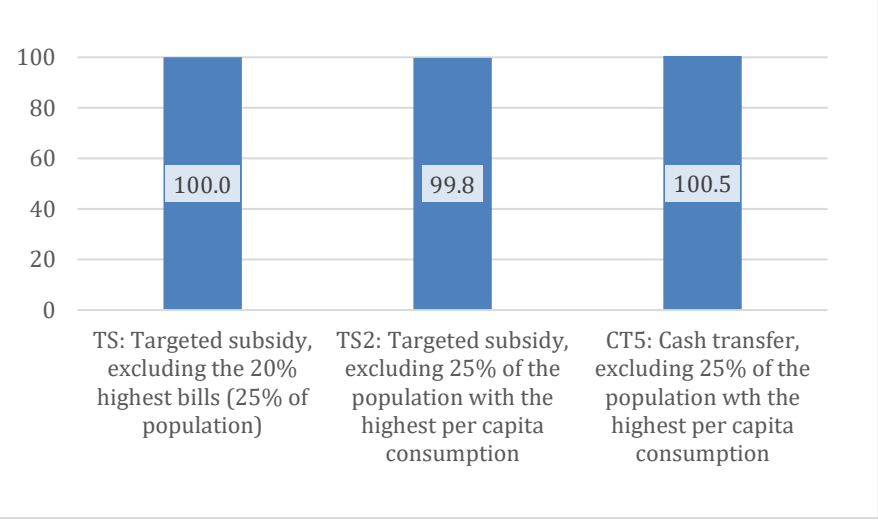
Source: Authors' calculation based on JSLC 2021

Overall, the assessment of the government of Jamaica's targeted subsidy is quite positive in terms of fiscal savings and access achieved. The simple exclusion filter was quite effective in reducing the overall cost of the subsidy. The budgetary savings of 45 percent of the universal subsidy originated, to a large extent, from households in the top three richest deciles, while the exclusion error among the poorest half of the population was quite low.

While the Jamaican subsidy was equitable in terms of access in that it covered a large share of the poorest 75 percent of the population, it was not equitable with respect to the average subsidy level. The level of subsidy received correlates with the level of electricity expenditure, which in turn correlates with the welfare level of the household. Thus, the households with a high level of consumption received a higher subsidy.

A more equitable distribution could have been achieved by channeling the same budget through a targeted CT program with simple flat benefit formula. This can be illustrated by comparing the government of Jamaica's targeted subsidy which excluded 20 percent of the consumers with the highest bills (equivalent to 25 percent of the population) to two alternative policies: (i) a welfare-targeted subsidy (TS2) offering the same 20 percent reduction in the electricity bills of the poorest 75 percent of the population and (ii) a CT program for the poorest 75 percent of the population with a flat per capita benefit equal to the median per capita universal subsidy (CT5). Note that all these policy options would cover 75 percent of the population and would have the same cost (Figure 0.10).

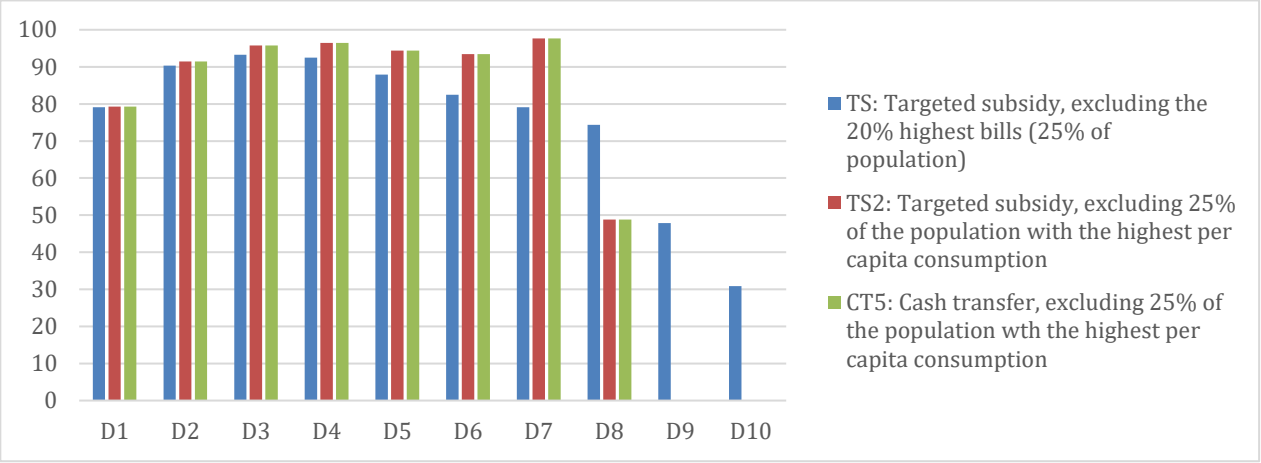
Figure 0.10 Welfare-targeted subsidies and targeted CT programs can have a similar cost with targeted subsidies based on consumption of subsidized commodity



Source: Authors' calculation based on JSLC 2021

The equity impact of these policies is different, **and results from differences in the specific population groups being covered or not covered (i.e., coverage of a particular decile) and the level of benefit received by those covered (the average benefit received by a particular decile).** Figure 0.11 and Figure 0.12 unpack these factors. Figure 0.11 looks at the share of population covered by decile. All three policies shown have the same total coverage, that is, 75 percent of the population, but they differ by decile. The welfare-targeted subsidy (TS2) and the cash transfer program for the poorest 75 percent (CT5) have the same coverage. Both cover almost all the population in deciles 1 through 7 plus half of the population in decile 8 except for those not connected to the electricity grid. The targeted subsidy (TS) implemented by the government of Jamaica covers a smaller share of the population, especially in deciles 6 and 7 and includes a significant share of population from the richest deciles (7 and 8).

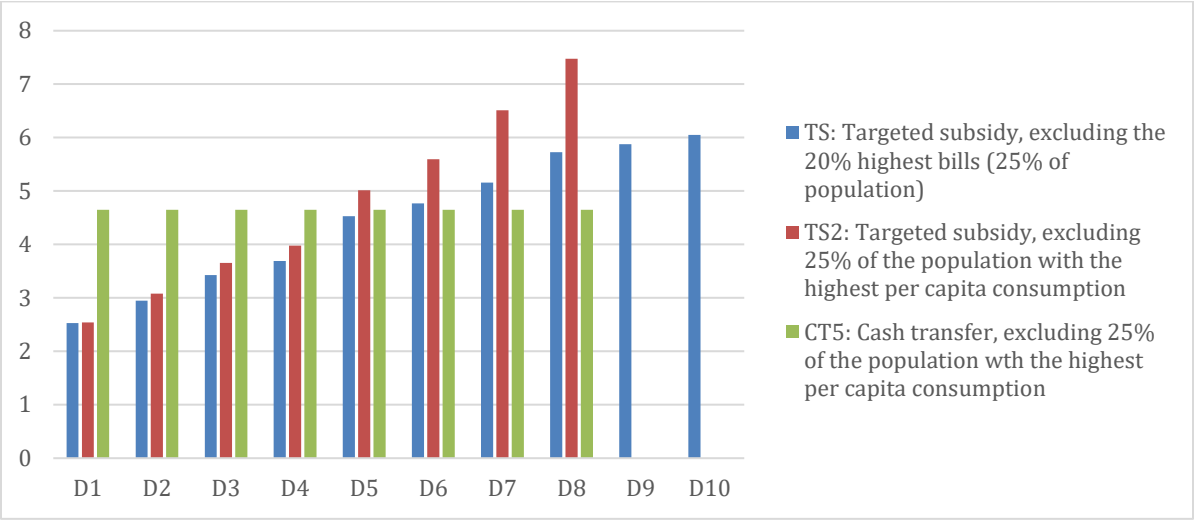
Figure 0.11 Coverage of targeted subsidies and CT by decile



Source: Authors' calculation based on JSLC 2021

From an equity perspective a CT program outperforms targeted subsidies. Figure 0.12 looks at the average per capita subsidy or the flat benefit level received by the population of a given decile. The benefits offered by a targeted subsidy available to 75 percent of the population ranked by their per capita consumption (TS2) would be (i) similar to those offered by a targeted subsidy that excludes the 20 percent highest bills (TS) for the population in the poorest half of the welfare distribution; (ii) slightly higher benefits than a TS for the population situated in the percentiles 51–75 percent; and (ii) no benefit to the top 25 percent of the population. The cash transfer program CT5 will offer a flat per capita benefit to the poorest 75 percent of the population. As illustrated in Figure 0.12, the population in the bottom 50 percent of the income distribution will receive a higher per capita benefit through the CT program than they would from either of the two targeted subsidies.

Figure 0.12 Average per capita subsidy and per capita CT benefit, by decile, US$ PPP 2017



Source: Authors' calculation based on JSLC 2021

The two proximate factors, coverage and benefit level, influence the actual share of the budget that goes to each decile from the two subsidy policies and the cash transfer. This is illustrated in Figure 0.13. Chiefly as a result of its benefit schedule, the cash transfer succeeds in transferring a higher budget to the population in the poorest half of the income distribution. With a well-run media campaign, a government could raise public awareness of this advantage and garner support from the majority of the population (winners), ensuring the political sustainability of the measure.

Figure 0.13 Share of the budget for targeted subsidies and CTs received by each decile

Source: Authors' calculation based on JSLC 2021

IV. Political economy of subsidy reforms: Why most countries in the Caribbean used subsidies to mitigate the recent spike in inflation

Subsidies tend to be popular for several reasons: They benefit most people, enjoy greater political support than targeted measures, produce immediate effects, and are quite transparent (Murti, Rutkowski and Gentilini, 2022). During crises, governments often ignore the undesirable effects of subsidies. For instance, subsidies are significantly more costly, more regressive,[19] and harder to roll back than other social protection measures; they also can have negative environmental effects. At the same time, governments may be reluctant to use SP measures to respond to a crisis when SP institutions struggle to deliver services, when awareness of SP alternatives or the time it takes to deploy them is lacking, or when the cost and benefits are not clear. A combination of factors such as these may explain why fully 18 Caribbean countries opted for subsidies and not for SP as mitigation measures.

Removal or redirection of subsidies toward alternative SP measures is difficult because of political economy problems. Subsidies have several political economy aspects that involve the interests of various groups, the political support or opposition they generate, public perception, and the dynamics of beneficiaries and resistance (Inchauste Comboni et al., 2018; Adler, 2016). These problems play a crucial role in shaping subsidy policies and their potential reforms:

- **Interest groups.** Subsidy reforms often face opposition from powerful interest groups, which makes it politically challenging to implement them. Subsidies often attract the attention of interest groups such as industry associations, labor unions, and consumer advocacy groups. These groups may have different perspectives on subsidies depending on how they are affected. Understanding the interests and motivations of these groups is crucial in assessing the political dynamics surrounding subsidies.
- **Political support or opposition.** Subsidies can be politically attractive for leaders because they allow political actors to deliver visible public benefits. Political leaders may be more inclined to support broad-based subsidies to gain popular support. On the other hand, opposition groups seize upon price increases as indicative of the failure of the government and mobilize around them; this can lead to riots and threaten leaders' reelection prospects (McCullough, 2023).
- **Winners and losers from subsidy reform.** Subsidy reforms are opposed by those who benefit from the current system (losers). Identifying who benefits from subsidies (winners) is crucial to understanding the political dynamics of subsidy reforms. Identifying the winners and losers can reveal the extent to which beneficiaries are politically organized and highlight potential challenges and opportunities for overcoming resistance to reform. Subsidies often benefit multiple social groups including both poorer segments of society and elites. Understanding these dynamics is important for designing effective subsidy reforms. A successful subsidy reform will need more winners than losers, as suggested by the median voter theory.
- **Public perception.** The public's understanding of the costs and benefits of subsidies is an important factor in their political attractiveness. Successful subsidy reforms often involve active communication with the public to explain the purpose and benefits of the reforms. Effective communication strategies are essential to garner public support for subsidy reform, especially to mobilize the winners to support the reform. Governments should articulate the benefits of reform, such as increased fiscal sustainability and enhanced social equity. This helps to lower the political cost of reducing subsidies and gain public support.

Yet removing subsidies can be tricky but can be achieved if SP systems are deemed viable options. Governments must design, communicate, and implement reforms clearly and carefully as part of a comprehensive policy package that underscores the benefits. A portion of the increased revenues should be used to compensate vulnerable households for higher prices through effective social protection interventions. Chapter four stresses the

[19] International evidence strongly suggests that mitigation measures through subsidies are both costly and regressive. In particular, general subsidies on fossil fuels are highly regressive because richer households consume substantially more of these than lower-income households (direct effect of the subsidies). The increase in the prices of other consumption goods that use fossil fuels is similarly distributed (indirect effect of such subsidies).

need to invest in robust delivery systems to ensure the population and policy makers have trust in it as an alternative to subsidies.

V. Conclusions

Subsidies are a useful policy tool to support households in coping with rising prices in the Caribbean, but alternative compensatory measures such as cash transfers could achieve significant fiscal savings and improve distributional outcomes. Switching from universal subsidies to a universal cash transfer programs with flat benefits, or from these to targeted cash transfer programs (either with an affluence test and targeted more narrowly) can increase cost savings and outcomes. The empirical case of the electricity subsidy in Jamaica illustrates the advantages.

Universal subsidies can be deployed quickly but are costly and regressive, disproportionately benefiting wealthier individuals. Although intended to benefit the poor, energy consumption subsidies are regressive as the bulk of the benefits accrue to those with the highest levels of consumption—those at the top of the income distribution. Subsidy programs also distort energy markets by encouraging excessive consumption overall. Subsidies aggravate fiscal imbalances and crowd out priority public spending that could be used for social protection measures.

Targeted subsidies that exclude high consumers are quite effective in reducing costs while maintaining a good degree of targeting compared to universal subsidies. As shown in the case of the electricity subsidy in Jamaica, the government has almost halved the cost when it excluded the 20 percent of the customers with the highest electricity bills.

While targeting is improved by excluding high consumers, targeted subsidies remain problematic because of inclusion and exclusion errors. They exclude many vulnerable households while still including a high share of the population from the top income quintile. Among those excluded are many vulnerable households who are not connected to the grid and those who are connected but have high electricity consumption because of large family size or energy inefficient houses and/or appliances.

Replacing subsidies with CTs would be more equitable and could generate important savings. Countries, depending on their institutional capacity, have several options to consider from flat (simple to administer) to more complex, progressive benefit formulas. A flat benefit cash transfer could be relatively easily implemented by collecting information on household size or merging data from civil registry statistics. Moreover, by providing a flat benefit to those who are not currently covered by the subsidy (for example those who are not connected to the grid) the scheme will become much more equitable.

Affluence-tested or more narrowly targeted cash transfers can achieve highest cost savings and best distributional outcomes. They have the advantage that they can cover a large share of the population, similar with a subsidy, while considerably improving the well-being of households in the lower part of the income distribution, at a fraction of the cost.

In addition to fiscal and welfare impacts, reorienting subsidies toward cash transfers has additional positive environmental impacts. Cash transfers programs will not alter the price of the commodity being subsidized and will induce customers to adopt the right behavior when the price of that commodity goes up, namely, to avoid excessive consumption. With the price increase, the commodity becomes scarce, and customers would consume less of that good, and more of other substitute goods.

The chapter also discusses the political economy of subsidy reforms and the reasons why subsidies are often used during crises. Subsidies have significant political economy aspects that involve the interests of various groups, the political support they attract, public perception, and the dynamics of beneficiaries and resistance. These factors play a crucial role in shaping subsidy policies and their potential reforms. It is important for governments to know that subsidies are not the only option to mitigate the increase in prices. Getting to a majority of "winners" to support a subsidy reform is feasible with cash transfer programs.

The chapter also highlights the importance of data and analytical capacity. Improving the government capacity to simulate alternative policy and program options would require availability of good microdata (such as frequent multi-topic household survey), building analytical capacity to use the microdata, and ensuring that the community of researchers and policy analysts have open access to microdata in the shortest time possible. Household survey data is key for enabling estimating the distributional effects of various policies and calibrating algorithms to assess the needs of households and thus determine their eligibility to receive compensatory support. Good analysis can stimulate and inform debate about the problem (raising prices) and its solutions, boost awareness, and build coalitions.

The chapter also emphasizes the importance of building social protection systems during good times to efficiently respond to crisis. A key element is to ensure that the delivery system is adaptable and scalable, from the ability to enroll, assess or determine eligibility, to payment. The following chapter discusses how prepared are the social protection systems in the Caribbean to respond to shocks and crisis.

Chapter 4. How prepared are Caribbean social protection systems to respond to shocks?

Introduction

This chapter assesses the preparedness of Caribbean SP systems to respond to systemic shocks, focusing on key adaptive features and processes in the delivery chain that are needed to implement a timely (non-contributory) cash transfer intervention. It begins with an overview of SP in the Caribbean including recent trends in ASP in this subregion that help in understanding the broader SP context in the Caribbean. The assessment focuses on four Caribbean countries (Belize, Grenada, Jamaica, and Saint Lucia) and builds on the work of Beazley and Williams (2021), which assessed Caribbean SP systems across institutional, financing, and delivery systems dimensions. The analysis in this chapter delves deeper in key adaptive features of SP interventions and the delivery systems dimension. It acknowledges the importance of institutions and financing to strengthen adaptive SP systems, though these two dimensions are out of the scope of this work. Four key processes in the delivery chain are analyzed: (i) intake and registration, (ii) needs assessment, (iii) enrollment, and (iv) payments.

This assessment is relevant not only to guide policy makers and practitioners in overarching areas of social protection. It also offers a roadmap toward more resilient, flexible, and adaptable SP systems and particularly the main processes of SP delivery systems. This roadmap provides policy makers and practitioners with guidance, direction, and actionable recommendations on how to better prepare SP systems for shocks and includes relevant international experiences that can inspire country-specific reforms to continue advancing toward ASP systems.

While this section is based on the most recent Caribbean data and evidence available, data challenges are acknowledged throughout this section. These data challenges should be seen as an opportunity for the Caribbean countries to advance in their agenda of data for development and evidence-based policy. As noted, the Caribbean region is broadly characterized by missing, outdated, and low-quality data, including both administrative and survey data. Most Caribbean countries, for instance, have no inventory of SP protection programs containing information on the supply of programs available in a given year or on the objective, level of expenditure, and number of beneficiaries of such programs. In addition, countries tend to collect household survey information only sporadically. Even the most recent household survey data in some countries —in Grenada from 2018 and Saint Lucia from 2016 — are already five or more years old. Among the Caribbean countries, only Jamaica collects living conditions household data every year. Due to the data limitations, some of the analytics presented in this report include different sets of countries, years, and definitions. While this hinders strict comparability, the information available nonetheless helps to better understand the SP context in the Caribbean. To overcome the data challenges, this assessment takes a more focused approach on select country cases to provide a more in-depth diagnostic of the key adaptive features and processes in the SP delivery chain in a data-constrained and relatively low institutional capacity context.

This chapter of the report is structured in four sections. Section I presents an overview of Caribbean social protection and regional trends in ASP in the region. Section II introduces the conceptual framework for the analysis and section III presents the assessment of the selected Caribbean countries based on this analysis. Section IV provides an in-depth analysis and assessment scorecard for selected Caribbean countries as well as policy recommendations for moving toward an ASP system.

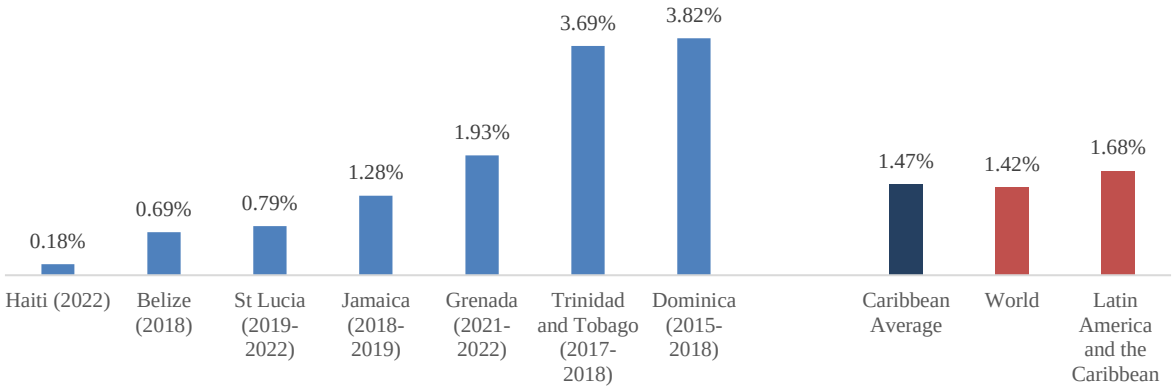
I. Social protection overview and regional trends in adaptive social protection

Social protection overview

The SP landscape in the Caribbean is highly heterogeneous, encompassing a mosaic of approaches and mix of achievements, challenges, and opportunities. Expenditure on SP aligns with global and regional benchmarks and reflects a broad commitment by the region to poverty reduction and human capital development. However, closer analysis shows considerable disparities across countries. Most countries in the region have substantial coverage gaps in social protection, both in absolute terms and in relative terms compared with global and regional benchmarks. This subsection offers a deep dive into the current state of social protection in the region, particularly social assistance. It highlights the intricacies of social assistance expenditure, coverage gaps, benefit adequacy, and the policy implications of the observed patterns.

While expenditure on social assistance in the Caribbean is on par with relevant regional benchmarks, the Caribbean regional average hides significant heterogeneity across countries. The Caribbean region spends approximately 1.5 percent of GDP on social assistance, slightly above the world average (1.4 percent) and slightly below the LAC average (1.7 percent). However, the expenditure range is wide, as shown in Figure 0.1. At one end are Dominica and Trinidad and Tobago, which allocate 3.7 and 3.8 percent of GDP, respectively, on social assistance. At the other end are Belize, Haiti,[20] and Saint Lucia, which spend less than 1 percent of GDP. These figures are mostly based on pre-pandemic data and focus on structural social assistance spending. Even in the few cases where the information was obtained after the pandemic outbreak (e.g., for Saint Lucia), this data focuses on established social assistance interventions rather than on temporary emergency interventions.

Figure 0.1 Public spending on social assistance (% of GDP)



Source: Annual social assistance expenditure is calculated by aggregating program-level social assistance data for the most recent year available. For Belize, estimations using data from the SP Expenditure and Performance Review (October 2020, ILO and UNICEF); for Dominica, WB SP Assessment reports; for Haiti, the IMF Haiti: Staff-Monitored Program-Press Release, and Staff Report; for Jamaica, WB SP Public Expenditure Review; and for Dominica, Grenada, Saint Lucia, and Trinidad and Tobago, WB staff estimations using data from the Atlas of SP Indicators of Resilience and Equity (ASPIRE) using annual GDP corresponding to the year for which more programs have information; for Latin America and the Caribbean and the world, data from ASPIRE considering the total social assistance expenditure excluding non-contributory health services. Note: The averages for different countries are for different date ranges, from 2015 (Dominica) to 2022 (Haiti and Saint Lucia, among others). The range reflects to some degree persistent data gaps in Caribbean countries. The average for the Caribbean, Latin America and the Caribbean and the world also includes multiple years (2015-2022), depending on the latest year of data available.

[20] This figure is based on the categorization of social affairs and labor in its social spending report of the Haitian Ministry of Economy and Finance.

Although public spending on social assistance in the Caribbean is on par with international benchmarks, significant coverage gaps persist and, in many cases, surpass global and regional benchmarks. The indicator used in this chapter for coverage of social assistance is the coverage of the flagship CT program. This is an important metric in and of itself, but also serves as a proxy for the broader coverage of the social assistance programs. Figure 0.1 provides a regional overview of the coverage of the flagship CT program alongside with the latest available national poverty rate estimated for each country, based on information from governments and multilateral institutions. The coverage of the CT programs was calculated as the number of individuals covered as a percentage of the total population below the poverty line, with the coverage numbers drawn from administrative records due to household survey data limitations. This metric shows that even if targeting was perfect, substantial coverage gaps remain. Since targeting is imperfect, coverage gaps are likely to be even larger than these calculations indicate. For instance, Belize's conditional cash transfer (CCT) program, Building Opportunities for Our Social Transformation (BOOST), only covers 4.7 percent of the population below the poverty line. Saint Lucia's Public Assistance Program (PAP) only covers 20.2 percent of the potential beneficiaries (i.e., the population below the poverty line) despite the recent notable expansion of PAP that resulted in a 50 percent increase in the number of beneficiary households from 2019 to 2022. Only Grenada and Jamaica have a CCT coverage rate above the global coverage rate for such programs.

Figure 0.2 Coverage of main cash transfer program

Country	National poverty rate, latest year available	Main Cash Transfer Program	
		Program name and type	Coverage rate
Belize	51.8	BOOST, conditional cash transfer (CCT)	4.7
Grenada	24.8	Support for Employment, Education and Development (SEED), CCT	48.2
Guyana	48.3	Old age pension, CCT	16.7
Jamaica	16.7	PATH, CCT	55.8
Saint Lucia	25.0	PAP, unconditional cash transfer (UCT)	20.2
Trinidad and Tobago	16.7	Food Support Programme, CCT	19.0
Global average UCTs			23.4
Global average CCTs			40.3

Source: Program beneficiaries for the latest year available (2017–23): for Belize, data from WB Adaptiveness of SP Systems in Belize – Stress Test Brief; for Grenada, Guyana, Haiti, Jamaica, and Trinidad and Tobago, data from ASPIRE; and for Saint Lucia, the Saint Lucia Human Capital Resilience Project. Country-specific sources of national poverty rates are presented in Annex A.
Note: (i) For Guyana, the poverty rate shown is not the national rate but is based on a harmonized income-based welfare aggregate constructed using the 2019 Guyana labor force survey and a poverty line of US$5.50 in 2011 PPP. (ii) The latest years available for the poverty rates for selected countries are Belize (2018), Grenada (2018), Guyana (2019), Jamaica (2021), Saint Lucia (2016), and Trinidad and Tobago (2005). (iii) Coverage is estimated considering beneficiaries from administrative information sources as a share of the population below the poverty line and using the most recent poverty rate information available. Data for global benchmarks are from ASPIRE and refer to the coverage of the poorest quintile. (iv) When a program's beneficiary unit was the household, the number was multiplied by the average household size.

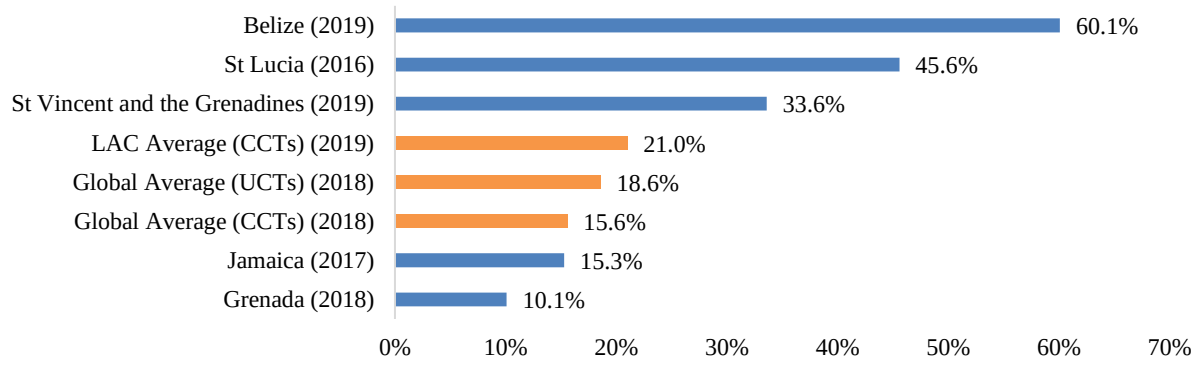
Most Caribbean countries for which data are available tend to be significantly more generous than relevant international benchmarks. Adequacy in social protection is usually assessed by comparing the amount of the transfer to a relevant (pre-transfer) level of income (or consumption).[21] As shown in Figure 0.3, which presents the

[21] Adequacy is defined as the transfer as a share of income (or consumption) of the poorest quintile.

estimated adequacy for key CT programs in those countries with available data,[22] benefit levels in Belize, Saint Lucia, and St. Vincent and the Grenadines are significantly higher than in the LAC region overall (CCTs) and the global averages for CCTs and unconditional cash transfers (UCTs). Benefit levels in Jamaica (2017 data) seem to be on par with the CCT global average and slightly below the LAC CCT average. Jamaica compensates for the relatively lower benefit adequacy of its PATH CCT with higher coverage than that of its peers and complements the PATH with other benefits (e.g., transportation subsidies, school feeding, and back to school grants for PATH beneficiaries) that traditionally are accounted separately for the same or similar target population.

The relatively low level of coverage contrasts with above-average adequacy levels in many of the Caribbean countries, reflecting the difficult trade-offs policy makers face in setting coverage and benefit levels of cash transfer programs. For instance, Belize and Saint Lucia have some of the largest coverage gaps among the countries in the Caribbean yet their adequacy levels are above global and regional benchmarks. While higher coverage and higher adequacy levels would be welcome from a human development perspective, budget resources are finite in the Caribbean countries given the high poverty rates and poverty gaps observed. The trade-off between coverage and benefit adequacy is a difficult policy decision that might also be politically sensitive. Other ways to improve the resource allocation of social assistance include strengthening targeting accuracy to ensure that the limited resources reach those in most need and boosting operational efficiency through enhanced delivery systems.

Figure 0.3 Adequacy of the main social assistance program



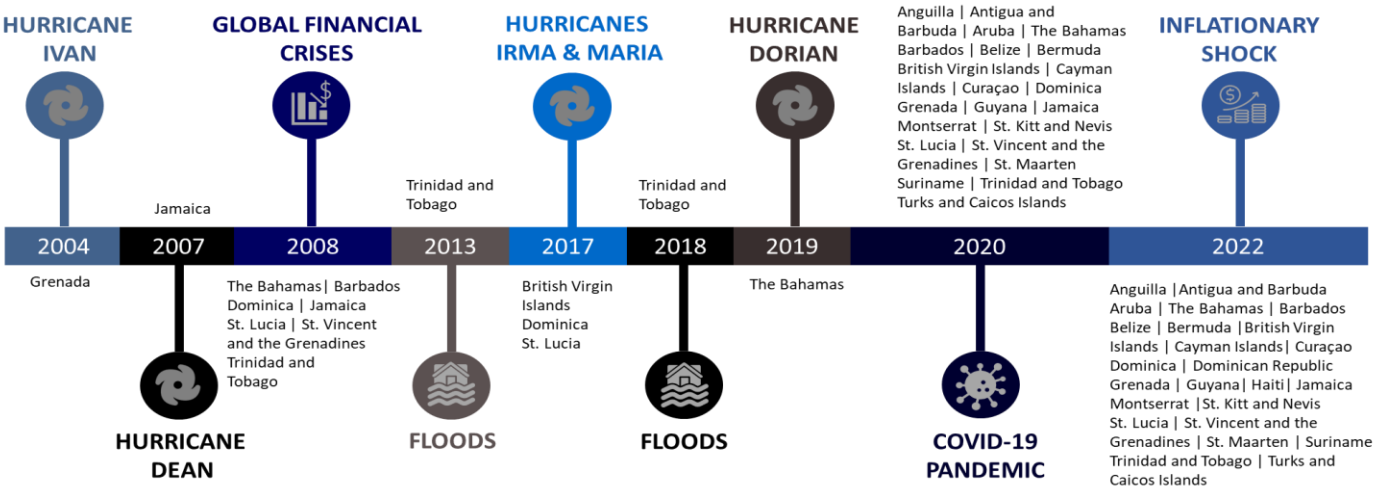
Sources: Data are updated and adapted from Table 4 in Beazley, R. and Williams, A. (2021. For Belize, Jamaica, Saint Lucia, and Saint Vincent and the Grenadines: program administrative data (last available year); Country Poverty Assessments; CPI data; and (for Saint Lucia) SLC data; World Bank Public Expenditure Review report for Jamaica (2019); administrative data and Grenada SLC-HBS 2018–19; and the World Bank's State of Social Safety Net Report (2018) for global averages. The global averages measure the CT value captured in household surveys as a share of beneficiaries' post-transfer welfare among the poorest quintiles. For Belize, Jamaica, Saint Lucia, and St. Vincent and the Grenadines, adequacy is estimated by using the last available average annual benefit as a share of the Food Poverty Line. Where the Food Poverty Line is outdated, it is adjusted to current prices using the official CPI data.

Caribbean trends in adaptive social protection

Social protection interventions have been used in the Caribbean since at least the first decade of the 2000s to support those affected by shocks and to promote resilience (Beazley et al., 2020). Although SP programs have not been designed to provide support in the aftermath of a large-scale shock (apart from small-scale relief grants), some Caribbean countries have relied on SP programs to respond to different types of covariate shocks (Figure 0.4).

[22] Estimations of adequacy were made for the following key CT programs in selected Caribbean countries: BOOST in Belize, SEED in Grenada, PATH in Jamaica, PAP in Saint Lucia, and the National Assistance Fund of St. Vincent and the Grenadines.

Figure 0.4 Selected countries' social protection interventions to respond to systemic shocks



Source: World Bank staff update of figure in Beazley et al. (2020).

While social protection interventions, particularly flagship CT programs, have long been used to respond to shocks and build resilience, their use has been ad hoc. The first documented use of a flagship CT program to respond to a large-scale natural disaster took place in Jamaica, when the PATH CCT program provided one-off cash grants in response to Hurricane Dean in 2007. More than 90,000 households registered in PATH received roughly US$28 (Williams et al., 2016). A few other countries in the Caribbean have since taken a similar approach. For example, Dominica, supported by the WFP and the United Nations Children's Fund (UNICEF), expanded its Public Assistance Programme in response to Hurricane Maria in 2017 (Beazley, 2018). In addition, The Bahamas implemented a one-off emergency food voucher system in response to Hurricane Dorian in 2019. Some cash transfer programs were also used to provide support during the 2008–09 Global Financial Crisis. For instance, in Dominica and St. Vincent and the Grenadines, cash transfer amounts were increased and adjusted. While this report focuses primarily on non-contributory cash transfer programs, it is also acknowledged that in some countries, social insurance institutions also have played a role in shock response. Grenada used its national insurance scheme in 2004 to provide an emergency unemployment benefit in response to Hurricane Ivan in 2004, and other countries including The Bahamas and Barbados used social security measures during the Global Financial Crisis.

Some countries in the Caribbean region have established CT programs specifically designed to support people affected by various shocks, although the scale and capacity of these programs to respond to systemic shocks tend to be quite limited. Such relief grants target people affected by idiosyncratic and covariate shocks such as localized natural disasters. Some examples of relief grants include Trinidad and Tobago's General Assistance Grants and Disaster Relief Grants; Emergency Grants through Jamaica's Rehabilitation Programme; Saint Vincent and the Grenadines' disaster relief grants; and Grenada's Disaster Relief Grant. Although these are ASP interventions by design, the scale of these programs and their capacity to scale up are typically very limited.

The COVID-19 pandemic completely changed the ASP picture, prompting most Caribbean countries to implement at least one social assistance measure, scale up the flagship cash transfer program, or launch emergency grants (Gentilini et al., 2022a). Several countries implemented top-ups i.e., a program's vertical expansion, in response to the pandemic. Among these were Barbados (the Welfare Department), Belize (BOOST), Cayman Islands (Permanent Financial Assistance), Jamaica (PATH), and Trinidad and Tobago (food card, Public Assistance, and Disability Assistance) (Beazley and Williams, 2021). Some countries also expanded existing CT programs to reach new beneficiaries (horizontal expansion), although this occurred less frequently. For instance,

Saint Kitts and Nevis expanded the coverage of the Poverty Alleviation Program and the Sint Maarten Income Support Program. Many governments also launched emergency grants that typically targeted informal workers and/or the poor and vulnerable who were excluded from other programs. Examples include the Unemployment Assistance scheme in The Bahamas; the Unemployment Relief Program and COVID-19 Cash Transfer in Belize; the Livelihood and Income Support to Employees and Self-Employed Persons in Dominica: and the COVID Allocation of Resources for Employees (CARE) programme in Jamaica (Beazley and Williams, 2021; Beazley et al., 2020). These responses were complemented with other measures such as in-kind transfers and social security measures.

Multiple Caribbean governments are using CT programs to respond to the recent inflation crisis, although general subsidies and fee waivers remain the most commonly used measures. Bermuda, Grenada, Guyana, Haiti, Jamaica, Saint Kitts and Nevis, Saint Lucia, and Trinidad and Tobago launched relief packages such as cash grants or adjusted the amounts of existing programs (vertical expansion). However, most countries in the region have chosen other social protection response strategies including in-kind transfers, tax exceptions, subsidies (e.g., for food and fuel), and increases in the minimum wages (Gentilini et al., 2022b; IDB, 2022).

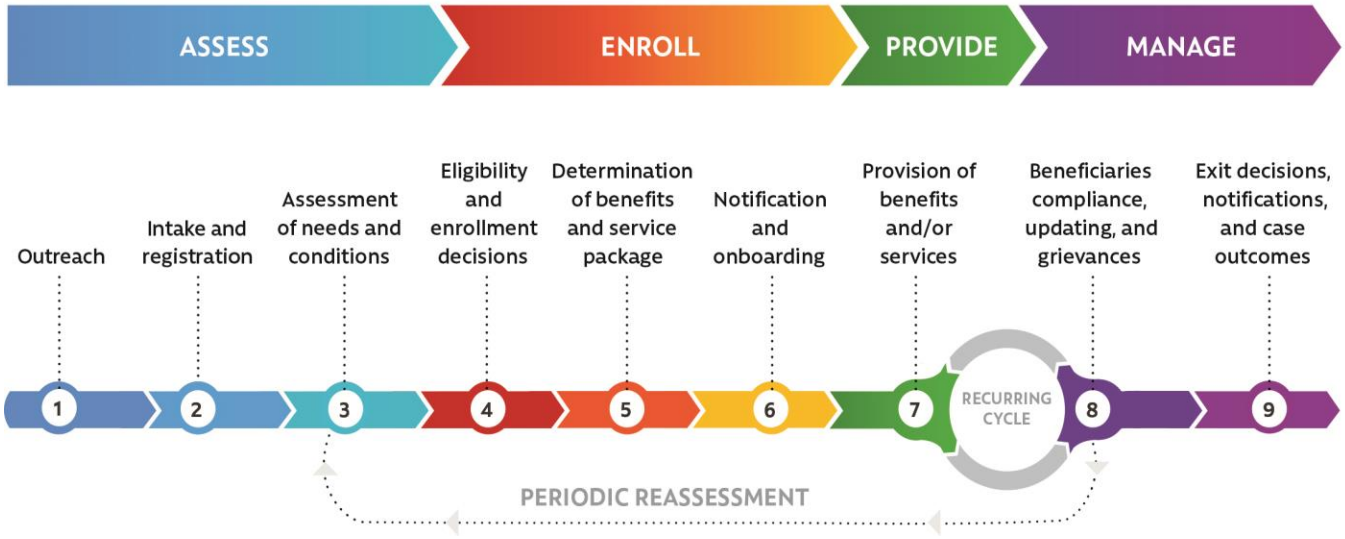
Although many countries in the Caribbean have relied on SP interventions to respond to large-scale shocks, they have not significantly adapted or prepared their SP systems and especially their delivery systems to better respond to future shocks. But the lack of preparedness of the SP system and its use on an ad hoc basis negatively affect the countries' ability to respond effectively and efficiently to shocks. These are compounded by an overall lack of preparedness in other, related systems. For instance, Caribbean social protection information systems, which can be crucial to inform and implement service delivery, are at a nascent stage, limiting their use for shock response. Similarly, while several countries have advanced toward digital financial service provision for cash transfer beneficiaries, most CT programs in the region still rely on a mix of approaches including manual delivery. The next section outlines the conceptual framework and the specific assessment instruments used.

II. Adaptive social protection conceptual framework and assessment instrument

This section outlines the conceptual framework used for this study of ASP in the Caribbean, particularly key adaptive features and processes in the delivery chain such as intake and registration, needs assessment, enrollment, and payments.[23] These operational procedures are crucial not only for the delivery of social protection during normal times but also in the aftermath of a shock. The magnitude of a shock may complicate the process of identifying and enrolling beneficiaries and then delivering benefits. This is particularly true when a large number of people require assistance. The impact of the shock and the responses to it can compound the challenges, as was seen with the COVID-19 social distancing and mobility restrictions. While all delivery processes in the delivery chain are important, intake and registration, needs assessment, enrollment, and payments are the most essential to the successful delivery of support after a shock. Figure 0.5 illustrates the delivery chain.

[23] The definitions for these processes are based on the Sourcebook on the Foundations of Social Protection Delivery Systems (World Bank, 2020). Definitions are as follows: (i) intake and registration are the process of collecting information on registrants who will be considered for inclusion in the program(s); (ii) needs assessment comprises the processes and methodologies for determining registrants' needs and conditions using data collected during intake and registration; (iii) enrollment is the process whereby, based on the needs assessment, those registrants who are deemed eligible and for whom the program has resources to provide benefits and services become beneficiaries and are enrolled in the program; and (iv) payments are the delivery of cash benefits to the beneficiaries.

Figure 0.5 Delivery chain for cash transfers



Source: World Bank, 2020. Sourcebook on the Foundations of Social Protection Delivery Systems

A traffic light scorecard, as illustrated in Figure 4.6, is used to assess both the adaptability and flexibility of key SP program features and the essential delivery processes of the main cash transfer programs in selected Caribbean countries. The World Bank team developed this scorecard based on similar tools, such as the World Bank's Stress Test Tool, and on assessments of ASP in southern Africa (Bowen et al., 2022) and in the Caribbean (Beazley and Williams, 2021). The team's work and this instrument allow a more in-depth analysis of key social protection features and delivery system procedures with indicators that have been designed for each process.

Three values are defined for each indicator that reflect the level of maturity of (i) the adaptiveness of the social protection system and (ii) key delivery processes: nascent (red), emerging (yellow), and established (green). Annex E presents the in-depth traffic light scorecard, where each row of the traffic light scorecard relates to an indicator. The first part of the scorecard captures key adaptive features of social protection interventions in response to shocks, for example program expansions or the launch of emergency cash transfer programs. The second part covers four essential steps of the delivery chain of a CT program. Section III of this chapter presents the scorecards for each of the four countries assessed, showing that the same indicators have different values in different countries.

Figure 0.6 Stylized traffic light scorecard

Source: World Bank staff.

III. Adaptive social protection assessment: Key features and delivery systems

In this section, the traffic light scorecard assessment tool is applied to assess the ASP capacity in selected Caribbean countries and also to provide a roadmap toward more resilient, flexible, and adaptable SP systems and delivery processes. The four countries studied are Belize, Grenada, Jamaica, and Saint Lucia. Assessments are presented in a series of tables that score their (i) ASP features and (ii) four key delivery processes. These scorecards draw on granular information about specific characteristics in each of the studied countries. This section also reviews the countries' SP responses amid the pandemic and other crises and reviews international good practices that the four countries (and beyond) could apply to facilitate ASP and prepare delivery systems for crisis situations.

Select Caribbean countries have limited readiness in their social protection systems to handle shocks, and their ASP functions are largely unsupported. In addition to using their existing CT programs, some countries have launched emergency programs in response to shocks, including the most recent crises. However, such programs have been established on an ad hoc basis and not as the result of proactive planning and preparedness. Moreover, while the overall capacity to deliver cash transfers in the Caribbean region has been improving, significant gaps remain. Organizational structures, guidelines, and protocols for intake and registration are in place, and countries have established a mechanism for assessing needs and conditions. Social registries for the main CT program of the selected countries have been occasionally used to inform social protection responses to shocks, but these registries are not risk informed. Countries are at different stages in the process of adopting and rolling out digital payments, and several challenges have yet to be addressed.

1. Adaptive social protection features

Experiences	Belize	Grenada	Jamaica	Saint Lucia
CT programs are used to support non-beneficiaries affected by shocks (horizontal expansions)	Nascent	Emerging	Emerging	Emerging
The vertical and horizontal expansion of the flagship CT program and/or the implementation of emergency CT are established in legislation, policies, or strategies	Nascent	Nascent	Nascent	Nascent
CT programs are used to support beneficiaries affected by shocks	Emerging	Emerging	Emerging	Emerging
An emergency CT program has been launched in response to a recent shock	Emerging	Established	Established	Nascent

Support to people affected by the COVID-19 crisis was channeled inter alia through cash transfer programs in the selected countries, as it was in most countries in the Caribbean. Some countries vertically expanded existing programs, some expanded their CT programs horizontally, and others launched new emergency programs. An example was the Belize COVID-19 Cash Transfer (BCCAT) initiative, a short-term (six months) cash transfer program with focused on impoverished households facing particular socioeconomic challenges that the pandemic exacerbated. Eligible households included those with unemployed family members who were not currently receiving social assistance benefits or contributory pensions. The program also introduced digital payment methods to make cash distribution more efficient. Saint Lucia responded to the pandemic by expanding the reach of its

existing PAP (horizontal expansion) and increasing the financial support. Jamaica introduced several temporary grants through its COVID Allocation of Resources for Employees (CARE) program. One of these, the Compassionate Grant, was aimed at individuals in need including tertiary students, the unemployed and informally employed, the elderly, and pensioners, among others. To be eligible, recipients should not have been formally employed and should not have received any other cash benefit from the COVID Allocation of Resources for Employees (CARE) program, with the exception of PATH beneficiaries.

In the four countries, social protection responses to the pandemic and inflation shock were ad hoc and reactive, and the measures adopted to respond to the inflation crisis have tended to be less efficient than targeted cash transfers. Although countries have turned to SP responses to shocks for over 15 years, they have made limited investment in preparedness in the social protection sector. As mentioned in Chapter 2, government responses to the inflationary shock have included fuel subsidies (Belize, Grenada, and Saint Lucia); food subsidies (Grenada and Saint Lucia); fee subsidies (Jamaica and Saint Lucia); and increases in the minimum wage (Jamaica) (Gentilini et al., 2022b). Such measures are relatively less efficient than targeted cash transfers programs in protecting the most vulnerable, as discussed in Chapter 3.

Only Jamaica has implemented a large-scale cash response to the inflation crisis. As highlighted in Chapter 2, in July 2022, the government announced an additional allocation of J$2.7 billion (US$17.4 million) for social interventions, including J$100 million (nearly US$650,000) earmarked for 10,000 social pensioners who are not beneficiaries of the PATH program. A few weeks later, in August 2022, the government announced it would also provide J$2.03 billion (US$13.10 million) in back to school grants to beneficiary students enrolled in the PATH and Poor Relief Programs. Each of the more than 150,000 beneficiary students in primary and secondary school were to receive an additional benefit of J$10,000 (approximately US$65) on top of their annual PATH back to school grant of J$3,500 (US$22.60).

2. Key delivery system processes

Intake and registration (front end, data collection)

Intake and registration	Belize	Grenada	Jamaica	Saint Lucia
Capacity for intake and registration of potential beneficiaries	Emerging	Emerging	Emerging	Emerging
Mechanism for on-demand intake and registration is in place (via the social registry or another mechanism)	Nascent	Established	Established	Emerging
Post-shock intake and registration processes are in place (potentially both for households already registered and for other households), including post-disaster needs assessments by DRM and local authorities)	Established	Emerging	Emerging	Nascent
Registration processes (for the social registry and/or the flagship CT program) are prepared to collect additional data during shock responses (for households already registered)	Nascent	Established	Emerging	Nascent

Intake and registration	Belize	Grenada	Jamaica	Saint Lucia
On-demand registration mechanisms are prepared to absorb additional demand post shocks	Nascent	Nascent	Emerging	Nascent
Measures to address the barriers to post-shock registration from the most vulnerable have been implemented	Nascent	Nascent	Nascent	Nascent
Mechanisms for post-shock data sharing are in place	Nascent	Established	Emerging	Emerging

Capacity to conduct intake and registration has been growing in the selected countries. Capacity in the four countries is emerging, in that organizational structures, guidelines, and protocols exist but gaps remain in terms of human resources, operating budgets, and IT systems. In addition, post-shock intake and registration processes are in place in Belize and Jamaica. The Jamaica Household Disaster Impact and Needs Assessment (JHDINA), redesigned in 2017, has now been digitized and is planned to be integrated into the forthcoming Social Protection Information System (Box 4.1). Grenada has a post-shock intake and registration process in place but has limited capacity to roll it out rapidly in the event of a shock. Saint Lucia currently does not have an established process in place that can be used in the event of an emergency.

On-demand mechanisms for intake and registration, which can be crucial during shocks, exist only in some of the countries. Grenada and Jamaica have such mechanisms in place, Belize does not, and Saint Lucia has some capacity but with important gaps. The utilization of on-demand registration systems represents a valuable approach in enhancing the adaptability and support for horizontal expansion. However, these on-demand systems may still encounter challenges when confronted with a catastrophic event. Administrators may find themselves overwhelmed by the sheer volume of applicants, grappling with an insufficient capacity to manage the influx, and contending with physical damage inflicted upon their administrative offices during the disaster. Even in during normal circumstances, cash transfer programs are often subject to constraints in terms of human and material resources. In the aftermath of a disaster, these limitations are further exacerbated, rendering them ill-prepared to shoulder additional registration responsibilities for post-shock scaling up efforts. Moreover, these departments will require supplementary office space, equipment, and budget allocations to accommodate these heightened demands (Smith and Bowen, 2022). Additional measures to address the barriers that the most vulnerable can face in post-shock registration— e.g., mobile registration units or additional registration locations, awareness campaigns, or ex ante coordination with local civil and community organizations—have not been identified in these four countries. The availability of a unique ID can play a key role in facilitating the registration of new beneficiaries. In countries with digital administrative databases and a unique ID, online applications could be quickly cross-checked against these databases for COVID-19 response programs (Marin and Palacios, 2022).

The mechanisms for intake and registration for the most part have not been prepared or adapted for crises. In all four countries, ASP preparedness is still nascent or between nascent and emerging. Measures that have proven valuable in crisis situations elsewhere in the world include relaxing or simplifying registration procedures, which can significantly mitigate the labor burden on administrative staff and expedite the overall process; waiving the collection of certain data points in the interest of expediency; and deploying additional personnel to provide essential support to the registration process (Smith and Bowen, 2022).

Box 4.1: Social protection post-shock intake and registration form and needs assessment tools: The Jamaica Household Disaster Impact and Needs Assessment

The JHDINA is an important instrument for the intake, registration, and evaluation of post-disaster needs of households affected by calamities in Jamaica. It further helps in the quantification of post-disaster social protection needs and provides essential information to guide social protection shock responses. The Humanitarian Assistance Committee, part of the National Disaster Risk Management Council, oversees the JHDINA. The Ministry of Labour and Social Security chairs the committee, which also includes representatives of Jamaica's national DRM agency, various government bodies, and NGOs such as Food for the Poor and the Adventist Development and Relief Agency. Multidisciplinary teams assembled by the committee and led by ministry social workers administer the JHDINA. The selection of communities to be assessed follows a prioritization protocol grounded in the outcomes of an initial national-level damage assessment.

The JHDINA underwent a comprehensive redesign in 2017 to address identified shortcomings, among them a reliance on paper-based data collection methods, the presence of insufficient variables to facilitate informed social protection responses across diverse actors, and limitations in the coordination of post-disaster household assessments. The redesigned instrument is crafted to ensure versatility, offering multiple formats to expedite decision making and foster seamless integration among the numerous agencies involved in disaster response efforts in the country. The questionnaire employed by the JHDINA captures a range of essential variables including disaster typology, geographical location, demographic composition of households, the state of health of household members, the receipt of social assistance, the extent of damage and losses incurred, and immediate needs arising in the aftermath of a disaster.

While Jamaica has not confronted a national-level disaster event since the redesign of the JHDINA, it is worth noting that even the pre-2017 JHDINA was pivotal in facilitating the expansion of the PATH and the extension of national insurance pensions to non-PATH-eligible households in the wake of Hurricane Dean in 2007. As such, the JHDINA plays an indispensable role in informing policy and programmatic responses to disasters, thereby enhancing the resilience of Jamaica's vulnerable populations.

Source: Smith and Bowen (2022) based on Beazley, R. and Ciardi, F. (2020a), Beazley et al. (2020), and Williams (2020).

Needs assessment (back-end application of targeting methods)

Needs assessment	Belize	Grenada	Jamaica	Saint Lucia
There is an established mechanism for assessing needs and conditions	Established	Established	Established	Emerging
Share of records older than three years in the social registry	Nascent	Established	Nascent	Established
Assessment processes to reach non-beneficiaries during shock responses are adapted	Nascent	Emerging	Emerging	Nascent
Robust verification processes are in place (including in-person verification and cross-checking with other data sources)	Emerging	Established	Emerging	Nascent
Coverage of the social registry or of other mechanism for assessing needs and conditions of the population	Emerging	Emerging	Nascent	Emerging
Social registry or beneficiary registry data used to inform ASP responses	Emerging	Emerging	Emerging	Emerging
Social protection registries are risk informed	Nascent	Nascent	Nascent	Nascent

The trend in the selected countries is to have a program-based social registry (and no integrated social registry) in place to inform the needs assessment of mainly the flagship cash transfer program. Moreover, mechanisms for assessing needs and conditions are largely automated. Examples include the BOOST program in Belize, the SEED program in Grenada, and the PATH program in Jamaica that rely on automated mechanisms for assessing needs and conditions against clear eligibility criteria (e.g., the application of a PMT). Saint Lucia uses an algorithm in the Saint Lucia National Eligibility Test 3.0 to assess needs and conditions. However, the planned social registry system is not yet in place, meaning the data collected electronically must be manually downloaded from the Survey Solutions platform, then included and run in the Saint Lucia National Eligibility Test 3.0. In light of this, the mechanism in Saint Lucia is considered emerging (Box 4.2 discusses Chile and the Dominican Republic as examples of best practices for needs assessment during emergency situations).

Social protection databases serve as invaluable reservoirs of data against which the vulnerability of households to adverse shocks can be assessed. Social registries can play a key role as these registries aim to encompass data pertaining to potential and actual beneficiaries (registered individuals and/or households), thereby providing a better platform for the identification of vulnerable households than beneficiary registries, which only contain information on the beneficiaries. It should be noted that both social and beneficiary registries serve dual purposes: first, as a foundational framework for the immediate provision of support to all residents within disaster-affected regions and second, as indispensable resources in the rapid assessment of households that are most susceptible in the prevailing crisis (Barca and Beazley, 2019; Smith and Bowen, 2022).

Although Caribbean social registries are not risk informed, they have been occasionally used to inform ASP responses. Social registries in the Caribbean are not designed or prepared to collect data to inform ASP preparedness or response actions. When such data were used to inform ASP responses, it was on ad hoc basis and in response to the pandemic. The BCCAT in Belize, for example, targeted households identified as poor by the Single Information System for Beneficiaries; the WFP and UNICEF programs responding to the pandemic in Saint Lucia leveraged existing social protection data. Importantly, the use of electronic verification against other databases to authenticate beneficiaries and to contrast and compare socioeconomic information (e.g., comparison of social registry data versus administrative social security data) is uncommon in the Caribbean region. During the COVID-19 crisis, many countries relied on data sharing across administrative databases (leveraging unique IDs) to cross-check and determine eligibility. The types of databases leveraged ranged from tax and payroll data, social insurance, education registries, electricity consumption and farmer/land registries among others (Marin and Palacios, 2022).

Social registry coverage with updated data, which is key to enable or constrain ASP actions, varies from country to country. Jamaica has relatively low social registry coverage (less than 15 percent), and a significant share of the information is likely outdated. Belize, Grenada, and Saint Lucia have moderate social registry coverage (above 15 percent and with updated information). With regards to how up-to-date social registry data is, the situation is mixed in these countries. Data have been collected and updated recently (via recertifications in 2023) in Grenada and Saint Lucia, but not in Belize. Saint Lucia, for instance, conducted a recertification and enrollment exercise in 2020–21 and again in 2023 that enabled it to complement, correct, and update preexisting data.[24]

[24] The rational for the 2023 recertification of data was that some households were enrolled as beneficiaries in the PAP during the pandemic with application of the Saint Lucia National Eligibility Test 3.0 instrument via phone or other electronic means and thus with limited household verification. The Ministry of Equity, Social Justice and Empowerment decided to verify the eligibility conditions of enrolled beneficiaries.

Box 4.2: Social protection intake, registration, and needs assessment tools: The experience of Chile and the Dominican Republic

In both Chile and the Dominican Republic, the Basic Emergency Assessment Tool, or Ficha Básica de Emergencia (FIBE), is an important post-disaster intake, registration, and needs assessment tool for identifying households adversely impacted by catastrophic events. This information-gathering instrument plays a central role in governmental decision-making processes concerning the allocation of emergency assistance to affected populations.

In Chile, the Ministry of Social Development is custodian of the FIBE database. The rationale behind this administrative arrangement is that the Ministry of Social Development, unlike the ministry with the primary disaster risk management mandate, concurrently administers the nation's social registry and maintains beneficiary registries for cash transfer programs. Thus, it is able to harmonize data procured through FIBE with other pertinent household information and enable resource targeting strategies. The Ministry of Social Development also has a framework of database interoperability agreements, extending its collaborative reach to encompass various line ministries, governmental bodies, and local authorities. This collaborative ecosystem ensures the synergistic utilization of data obtained through FIBE, enhancing the efficacy of disaster response efforts.

Similarly, in the Dominican Republic, one entity is tasked with the oversight and management of data collected via FIBE. The Single Beneficiary System, or Sistema Único de Beneficiarios– SIUBEN , is responsible for collecting, overseeing, and disseminating data derived from FIBE. Notably, the Single Beneficiary System SIUBEN also exercises control over the nation’s social registry and administers the Index of Vulnerability to Climate Shocks, or Índice de Vulnerabilidad ante Choques Climáticos. The Index is a sophisticated analytical tool designed to compute the likelihood that a given household may fall victim to specific climatic shocks. This holistic oversight vested in the Single Beneficiary System SIUBEN underscores its pivotal role in ensuring the seamless integration of data collected through FIBE with broader vulnerability assessments, further enhancing the nation's capacity to proactively respond to climate-related disasters.

Source: Beazley (2017) and Beazley et al (2019)

Enrollment (often includes additional data collection)

Enrollment	Belize	Grenada	Jamaica	Saint Lucia
Requirements for enrollment of new beneficiaries during shocks are adapted	Nascent	Nascent	Nascent	Nascent
Enrollment procedures are adapted to ensure vulnerable groups can access social protection measures	Nascent	Nascent	Emerging	Nascent
Vulnerable households where shocks are more predictable and recurrent were pre-enrolled	Nascent	Nascent	Nascent	Nascent
Automatic enrollment for shock responses	Nascent	Nascent	Nascent	Nascent
Remote enrollment for shock responses	Nascent	Nascent	Nascent	Nascent
Beneficiary registries are digital	Emerging	Emerging	Established	Nascent
Electronic data collection	Emerging	Emerging	Emerging	Emerging

Enrollment processes have not been adapted for shock responses in the four studied countries. Several measures used elsewhere could have been put in place (Smith and Bowen, 2022). During times of crisis, for instance, it may be prudent to temporarily relax the rigorous validation processes typically employed to assess eligibility. Measures such as home visits or community validation, which can be time consuming and resource intensive, could be streamlined or temporarily suspended to expedite the delivery of assistance to those in need. Modifying proof of identity requirements can ensure that individuals who may have lost their identification documents during a crisis are not precluded from accessing essential assistance. Tailoring enrollment procedures to cater to the specific needs of vulnerable groups such as the elderly, disabled, or those with limited literacy can ensure their access to the assistance programs. This could involve simplified enrollment forms, mobile enrollment units, or community-based registration efforts to reach those who may face barriers to traditional enrollment channels. By including these emergency protocols in rules of operations and operational manuals, countries can better prepare for the next crisis with clear delivery processes.

No pre-enrollment initiatives targeting households situated in regions characterized by a high susceptibility to shocks have been implemented. Nor have mechanisms for automatic or remote enrollment been established that are expressly tailored for swift and targeted shock response interventions. Pre-enrollment in this context entails the meticulous gathering of all requisite operational data and the provision of necessary documentation in advance, with the intention of facilitating rapid deployment when needs arise. This approach is particularly relevant in situations characterized by slow-onset and recurrent shocks, such as protracted droughts, where it is feasible to confidently identify a cohort of households that are likely to be severely affected and in urgent need of assistance well in advance of the onset of the crisis. (The experience of pre-enrollment in Kenya is described in Box 4.3.) A similar approach can be considered for other types of shocks that would affect the population in a specific geographical location (near a volcano, in areas prone to landslides, etc.).

Beneficiary registries of the main cash transfer programs in the selected countries are mostly digital for the main cash transfer program, with supporting management information systems (MIS). Belize, Grenada, and Jamaica have MIS and digital beneficiary registries, albeit with limitations. Only Saint Lucia still has no MIS for

its PAP beneficiary registry and continues to use Microsoft Excel for its payment list and record keeping. Data collection is also electronic for the flagship programs in all four of the selected Caribbean countries. MIS, digital registries, and electronic data collection are important enabling factors for data sharing and use as well as ASP-related actions. However, the existence and use of MIS for the flagship programs in Belize, Grenada and Jamaica coexists with programs operating without MIS at all. None of the four countries have a fully integrated beneficiary registry that consolidates information on multiple benefits and services for a better understanding of who is receiving what social benefit or service. The Single Information System for Beneficiaries in Belize was intended to be a single identification system for all social protection benefits and services at the time of its design. Currently, the Single Information System for Beneficiaries is used for just BOOST and the Ministry of Education's school subsidy program (World Bank, 2019).

Box 4.3: Why the coverage of the social registry matters for ASP: The cases of Kenya and Lesotho

In advance of implementation of the second phase of the Hunger Safety Net Programme, Kenya conducted an exhaustive census operation encompassing all households residing within the drought-affected counties designated for the Hunger Safety Net Programme deployment. Consequently, participating households were duly registered within the program's management information system, and pre-enrollment was carried out as part of this process. The result was the establishment of a comprehensive database comprising the majority of households situated in the northern regions of Kenya. This database, replete with a wide array of household-specific characteristics and poverty scores, facilitated the ranking of households within the social registry based on their wealth status. As a direct outcome of this approach, an additional 180,000 destitute and vulnerable households were successfully pre-enrolled, thereby expanding the potential reach of periodic emergency relief payments to these marginalized populations.

Lesotho presents a starkly different picture. Despite the commendable extent of household coverage that the National Information System for Social Assistance achieved, a regrettable absence of data was noted for 28 of the 64 community councils affected by the 2016 El Niño-induced calamity. This critical data deficiency within the National Information System for Social Assistance significantly hindered its utility as a resource for the precise targeting of emergency relief interventions in response to the disaster. Since then, however, Lesotho has made important efforts to expand the coverage of the National Information System for Social Assistance, which now reaches virtually all households.

Source: Smith and Bowen (2022) based on Otulana et al. (2016) and Kardan et al. (2017).

Payments (delivery of cash)

Payments	Belize	Grenada	Jamaica	Saint Lucia
CTs are delivered into transaction accounts (mobile money accounts or financial institution accounts)	Established	Nascent	Nascent	Established
CT beneficiaries choose the payment method and provider, which enhances resilience to shocks	Emerging	Emerging	Emerging	Emerging
CT programs share the same payment infrastructure and centralized payment execution	Nascent	Emerging	Emerging	Established
The payment mechanism of the main CT program is flexible to respond to shocks	Nascent	Nascent	Nascent	Nascent

The electronic delivery of cash transfers is mixed across the selected countries. Saint Lucia has the most advanced system for delivering cash of the four countries studied: Most transfers are digital and delivered into transactions accounts, many social cash benefits use the same payment infrastructure, and payments are largely centralized by national treasury. Belize's main cash transfer program, BOOST, utilizes a network of nine credit unions across the country to distribute payments. To participate, beneficiaries must open an account with one of the credit unions, and more than 95 percent of the current beneficiaries have such an account. Belize is exploring additional transfer options and recently used a mobile wallet provider, DigiWallet, and its infrastructure for payments in two emergency cash transfer programs. While it has made promising progress in digital payments, Belize is still using different payments systems and infrastructure to deliver the permanent programs such as BOOST and the non-contributory pension system. However, as outlined in Box 4.4, Belize established a special cash transfer program to deliver emergency support during the pandemic. In Grenada and Jamaica, most payments are still made manually in cash, checks, and via post offices. Electronic transfers can usually provide a more flexible and scalable platform for shock responses except in contexts where the electronic payment infrastructure is not reliable.

Freedom of choice with respect to payment methods and providers is rather limited in the flagship cash transfer programs of the selected Caribbean countries. In general, beneficiaries can choose between two payment methods but cannot select their provider. From an ASP perspective, freedom of choice in SP programs can enhance beneficiaries' resilience to shocks and their coping capacity during crises. There are several reasons for this: (i) individuals and households have varying financial needs, circumstances, and preferences and a different provider might be the best fit for different beneficiary segments;[25] (ii) access to traditional financial institutions and banking services may be limited, especially during crises; (iii) choice empowers beneficiaries by recognizing their autonomy and decision-making capacity; (iv) choice of provider increases competition and thus can improve conditions for beneficiaries and non-beneficiaries alike; and (v) since beneficiaries' needs may change during crises, ensuring SP programs allow beneficiaries to switch payment methods or service providers as needed, also contributes to ensure that financial providers remains responsive to evolving circumstances.

Payment mechanisms have not been designed for shock response purposes. None of the four countries have yet developed protocols, established stand-by agreements with servicer providers, created alternative payment mechanisms, or put other measures in place to prepare for crises situations. Such measures can enhance the operational continuity of payment mechanisms as well as give them flexibility to scale up if needed. Furthermore, the characteristics of the digital payment mechanisms itself could impact the program and individuals' shock responsive capacity. Some aspects that should be considered include (1) embedding awareness and financial literacy efforts into regular social protection programs instead of trying to introduce these during a shock response; (2) leveraging transaction accounts instead of single use payment instruments that can offer beneficiaries a broader set of financial services to weather shocks; (3) working across government agencies to advance the digital financial services ecosystem, primarily electronic payment acceptance which could enable beneficiaries to use their benefit digitally when liquidity challenges—common during shocks—arise.

[25] This also increases beneficiary convenience, allowing beneficiaries to choose the closest provider and thus reduce travel time and cost.

Box 4.4: Innovating delivery systems in a crisis: Belize COVID-19 Cash Transfer Program

Belize responded to the COVID-19 pandemic by setting up digital payment systems to deliver financial support to vulnerable populations. The BCCAT program, aimed at addressing the immediate economic hardships faced by vulnerable households affected by the pandemic, was spearheaded by the Ministry of Human Development, Families, and Indigenous Peoples' Affairs in collaboration with strategic partners including the National Bank of Belize Limited, Digi, and the Belize Social Investment Fund.

BCCAT served as a crucial short-term emergency cash assistance initiative, targeting households that did not meet the criteria for existing social assistance programs. BCCAT beneficiaries received financial support of BZ$150 (Belize dollars) every two months for six months. A notable feature of the BCCAT was the utilization of MobilePayz, a newly developed mobile payment solution by Digi. The tool allowed beneficiaries to cash out their funds using their mobile phone or a unique code. This innovative digital platform facilitated efficient and secure transactions, ensuring that the financial aid reached its intended recipients in a timely manner.

In another CT initiative in the face of a disaster, the Ministry of Human Development, Families, and Indigenous Peoples' Affairs in 2023 introduced the Hurricane Lisa Cash Assistance Programme in collaboration with WFP and in partnership with DigiWallet Limited This program specifically targeted 1,600 vulnerable households that were severely affected by the impact of Hurricane Lisa. An additional 584 households received cash assistance in a second round. Eligibility for the Hurricane Lisa Cash Assistance Programme was determined based on the extent of damage incurred by the household and the vulnerability of individuals residing within these households. As part of this initiative, eligible households located within the Belize and Cayo districts received a one-time emergency cash assistance of BZ$250 through the DigiWallet platform. Beneficiaries could use DigiWallet's cash out services to withdraw the funds or make purchases and payments through their mobile wallet, including utility payments, person-to-person transfers, and other available services on the platform. In 2022, DigiWallet, the Belize National Emergency Management Organization, the Ministry of Human Development, Families, and Indigenous Peoples' Affairs , and the Ministry of Agriculture, Food Security and Enterprise established a two-year partnership with the aim of providing innovative and digital financial products to support Belize's disaster risk management and social protection efforts during times of crisis.

Sources: WFP note and Digiwallet partners with Government of Belize to support Hurricane Lisa Cash Assistance Programme". Available at: https://www.digiwallet.bz/mhd/

IV. Policy recommendations and final reflections

The experiences of both the COVID-19 pandemic and the global inflation crisis underscore the critical relevance of ASP in the Caribbean. While some Caribbean countries had used social protection programs to respond to a range of shocks, including natural disasters and economic downturns, the COVID-19 pandemic triggered an unprecedented surge in such responses. The persistent global inflation crisis and regional inflation spike, however, have elicited different responses. Apart from a few notable instances of cash-based programs, Caribbean countries have largely favored less-efficient measures such as food and fuel subsidies, which is at least partially explained by the limitations in their delivery systems.

While Caribbean social protection systems differ across countries, this study shows many of these countries face significant challenges in their social protection preparedness and shock-responsive capacity. The overarching trend in the region is the reactive, ad hoc utilization of social protection programs to respond to shocks, rarely accompanied by proactive planning or preparatory measures for future crises. Given the Caribbean's susceptibility to diverse covariate shocks, proactively investing in advancing the ASP agenda is of paramount importance. Such investments hold the potential to enhance the efficacy, timeliness, and adequacy of responses to shocks and thus rendering them more effective for vulnerable populations.

Structural gaps in social protection systems constrain adaptive social protection actions in the region. Although cash transfer programs have been expanding, significant gaps limit the use of such programs to reach populations affected by shocks, for instance through vertical expansions. Most countries have in place a mix of programs that support human capital investments and enhance household resilience. These include poverty-targeted cash transfer programs, social pensions, school feeding programs, active labor market programs, and social insurance. In many instances, social protection coverage is low, the supply of programs is fragmented, and coordination is limited (Beazley and Williams, 2021). The same applies to social assistance alone.

Social protection administrative capacity has been improving, but further investments and efforts are required. Most cash transfer programs in the region still rely on fairly rudimentary business processes and information systems, including for the critical functions of intake and registration, needs assessment, enrollment, and payments. For instance, payments mechanisms continue to include manual cash delivery and checks, and, in some cases, it is still the main payment mechanism.

Strengthening the building blocks of ASP systems in the Caribbean, a key recommendation in a prior World Bank assessment, is all the more relevant today. The 2021 assessment set forth recommendations for the ASP "building blocks" that are not covered in this chapter, including for institutional arrangements and partnerships and financing (Beazley and Williams, 2021). However, other of its recommendations on programs, data, and information are salient to the assessments in this report as they relate to some extent to delivery systems. High-level recommendations relevant to this report include the following: (i) developing adequate DRM and social protection legislation and strategies, as well as effective coordination mechanisms; (ii) developing effective and appropriate disaster risk financing instruments,[26] including established funding mechanisms for ASP; (iii) developing complementary measures to strengthen the impact of social protection programs on resilience, such as productive inclusion interventions and strategies to link social protection beneficiaries to employment[27] and to other complementary services beyond social protection; and (iv) developing contingency and emergency protocols for social protection shock responses.

[26] The Caribbean Catastrophe Risk Insurance Facility is one such innovative mechanisms, a multi-country parametric risk insurance mechanism that limits the financial impact of natural hazard events.

[27] Two such resilience-enhancing complementary measures are the Steps to Work program in Jamaica and Belize's Job Readiness Component.

There are opportunities in Caribbean social protection systems to continue advancing the ASP agenda along the dimensions covered in this assessment and improve their preparedness for shocks. Opportunities exist for countries in the Caribbean to strengthen the key processes of the delivery chain. Established, mature processes entail the following:

- **Intake and registration.** A mature system requires mechanisms for intake and registration with adequate organizational structures, human and material resources, and IT systems, among others. This capacity should be in place throughout the national territory. There should be mechanisms for on-demand intake and registration, prepared to absorb the additional demand arising after a shock. Governments should also have the capacity to conduct post-disaster needs assessments rapidly and at large scale by leveraging the capacity of local NGOs or humanitarian actors if needed, with mechanisms, protocols, and MoU in place to share the resulting data. Ideally, these recommendations should be implemented without delay to ensure they are working before the next shock.
- **Needs assessment.** A system categorized as established has a standardized and fully automated mechanism for assessing needs and conditions based on clear eligibility criteria. The assessment of needs and conditions is updated regularly and is used by programs to determine continuing eligibility. Verification processes are in place, both in person and for cross-checking with other data sources. For the processes to be effective, social registry data (or data in other databases used for this purpose) should be recent and with high national coverage or at least high coverage in regions most frequently affected by shocks (exposure) and with the highest vulnerability to such shocks. In addition, registries should contain data useful for preparedness and response actions.
- **Enrollment.** Procedures and requirements for enrollment of new beneficiaries should be adapted and made more agile for shock responses—for instance, protocols in place to waive certain requirements or otherwise respond to crisis situations. Procedures should also be adapted to ensure vulnerable groups have access during crises (e.g., through special assistance filling out forms and transport). Procedures for automatic enrollment should be in place. Governments may also consider pre-enrolling vulnerable households in areas where shocks are more predictable and recurrent.
- **Payments.** Leverage recent innovations and keep the momentum created by the responses to the pandemic. While digital infrastructure and ecosystems in the Caribbean largely do not support the digitalization of social protection, there have been a few promising innovations in this area in the region. A payment mechanism that is adaptive would include the following characteristics: (i) cash is delivered electronically (although digital transfers can be complemented with manual mechanisms when needed); (ii) beneficiaries receive the transfers through account-based methods that allow for easy cash out; and (iii) beneficiaries can chose their payment method and provider. In addition, protocols and measures are in place to make payment mechanisms flexible and adaptable, including alternative delivery mechanisms and stand-by agreements with service providers.

Finally, in addition to improving business processes along the delivery chain, countries in the Caribbean should continue to shift from single intervention systems toward the development and operationalization of integrated social protection information systems. The goal would be to develop integrated, interoperable, and risk-informed information systems that include data useful for ASP actions. Such systems ideally would allow for data exchange with sectors relevant for ASP, including DRM and humanitarian actors, and would contain high-quality and updated data.

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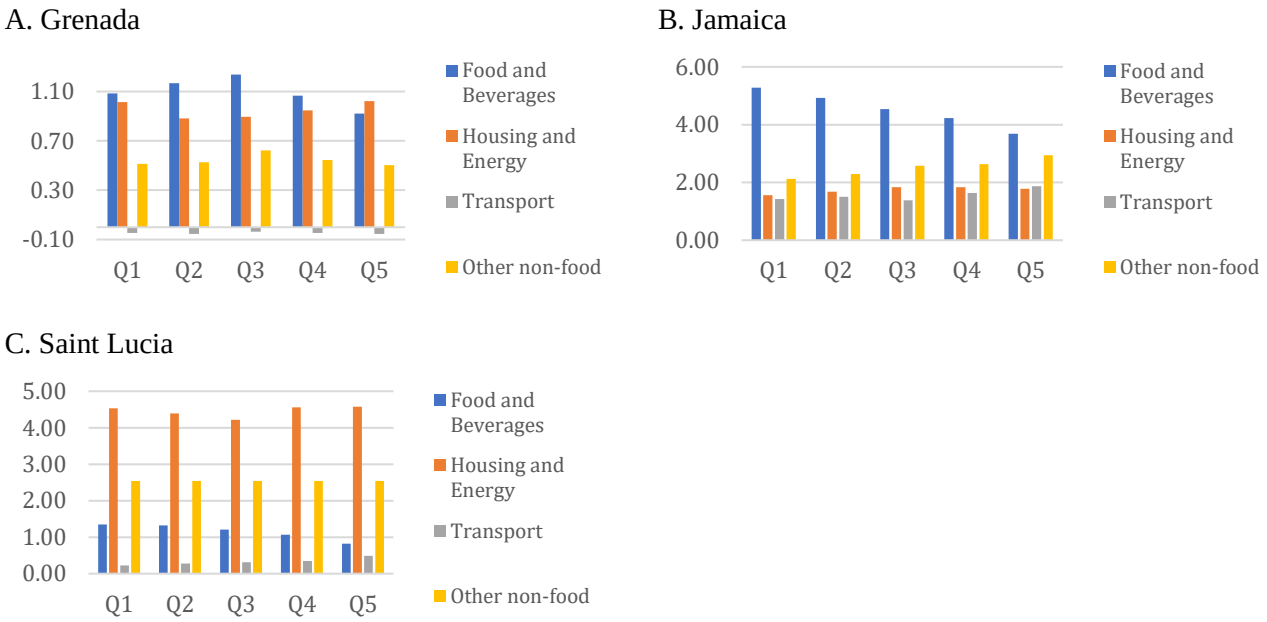
Annex A. Sources of national poverty rates shown in Box 1

Country	Source
Antigua & Barbuda	CDB Country Poverty Assessment Report
Bahamas, The	Bahamas NSO based on Household Expenditure Survey: 2013
Barbados	IDB based on Barbados Survey of Living Conditions: 2016
Belize	Belize Poverty Study based on Household Budget Survey: 2018
Dominica	CDB Country Poverty Assessment Report
Grenada	WB/CSO: Grenada Poverty Assessment
Guyana	Guyana Poverty Reduction Strategy Paper 2011
Haiti	L'Institut Haïtien de Statistique et d'Informatique (IHSI)
Jamaica	Planning Institute of Jamaica
Saint Kitts & Nevis	CDB Country Poverty Assessment Report
Saint Lucia	CDB Country Poverty Assessment Report
Saint Vincent & the Grenadines	CDB Country Poverty Assessment Report
Suriname	IDB based on Suriname Survey of Living Conditions: 2016
Trinidad & Tobago	TTO CSO based on Survey of Living Conditions (SLC): 2005

Annex B. Contribution of price increases of different consumption categories to quintile-specific inflation

Figure 0.6. Living cost increases were similar across the welfare distribution, 2022



Source: World Bank staff calculation based on JSLC 2021, Grenada SLC-HBS 2018, and Saint Lucia SLC-HBS 2016 and on CPI data from STATIN and ECCB.
Note: The inflation contribution of each component is approximated by multiplying its inflation rate by its consumption share. To ensure that the sum of the contributions adds up to the overall inflation rate, they are re-scaled.

Annex C. Nowcasting poverty to assess the impact of inflation in 2022

Recent data on poverty is rare in the Caribbean. Even in Jamaica, which collects data to measure poverty on an annual basis, the most recent available data refers to 2021 and hence does not include the period of the inflation spike in 2022. To assess the poverty and distributional impact of inflation in 2022 on poverty, we therefore nowcast poverty from the latest survey year available. We do this for Jamaica, Saint Lucia and Grenada, because the microdata is available and relatively recent, and we have harmonized consumption-based welfare aggregates for poverty measurement for these three countries.[28] Existence of such harmonized datasets allows for application of standardized approaches to obtain estimates for a range of countries faster than country-by-country approaches working with the original microdata. In addition, it allows for cross-country comparability.

A simple and effective way to nowcast poverty from the latest year with available data to the present is to scale up the welfare distribution by a fraction of real per capita GDP growth (Mahler et al. 2022). This is the default approach to project poverty for the World Bank Macro and Poverty Outlook (MPO). However, this approach imposes distribution-neutral growth of household welfare. It does not take into account that consumption might change at different rates across the income distribution. In the case of inflation, the purchasing power of poorer households might be affected more heavily if a larg er share of their consumption baskets consists of goods that experienced higher inflation, such as is often the case with food. This would result in higher poverty rates and welfare losses than a distribution-neutral approach would project.

We therefore build on Wu and Yoshida (2022) who modify the distribution-neutral poverty projection method and quintile-specific inflation rates that vary depending on the consumption patterns of households to estimate the welfare impact of inflation in East and Southern Africa. Instead of using real per capita GDP growth to scale up the welfare distribution, Wu and Yoshida (2022) use nominal per capita GDP growth and deflate it with quintile-specific inflation rates, accounting for a factor to relate the growth rate of the GDP deflator with the inflation rate and a so called pass-through rate that establishes the fraction of growth in real per capita GDP to that "passes through" to welfare as measured in the household surveys. They calculate the quintile-specific inflation rates as the weighted average of food and non-food inflation rates, where the weights are the food and non-food budget shares for each quintile, coming from the household surveys. Since they only have access to projections for overall inflation, they nowcast poverty in 2022 for three scenarios: (i) food inflation grows twice faster than non-food inflation, (ii) non-food inflation grows twice faster than food inflation, and (iii) food and non-food inflations grow at the same rate, with this scenario being equivalent to using a fraction of real GDP per capita growth to scale up the welfare distribution. For scenarios (i) and (ii), they ensure that the weighted averages of the food and non-food inflation rates equals the projected overall inflation rates. These scenarios were selected because, in East and Southern Africa, most countries' food and non-food inflation rates in 2020 and 2021 belonged to this range.

We depart from Wu and Yoshida (2022) by (i) using actual inflation rates observed in 2022, and (ii) considering inflation rates of selected non-food consumption categories separately when calculating the overall inflation rate. These are housing and energy, transport, hotels and restaurants. They were selected, because they were the categories with the highest inflation rates in Caribbean countries in 2022. We hence calculate our quintile-specific inflation rates as:

$$\pi_{T1}^{q,T2} = \frac{\omega_f^q CPI_{T2}^f + \omega_{h\&e}^q CPI_{T2}^{h\&e} + \omega_t^q CPI_{T2}^t + \omega_{h\&r}^q CPI_{T2}^{h\&r} + \omega_{onf}^q CPI_{T2}^{onf}}{\omega_f^q CPI_{T1}^f + \omega_{h\&e}^q CPI_{T1}^{h\&e} + \omega_t^q CPI_{T1}^t + \omega_{h\&r}^q CPI_{T1}^{h\&r} + \omega_{onf}^q CPI_{T1}^{onf}} - 1$$

where $\pi_{T1}^{q,T2}$ is the CPI-based quintile-specific inflation rate from $T1$ to $T2$, ω_f^q refers to the average food budget share of quintile q, $\omega_{h\&e}^q$ refers to the average housing and energy budget share of quintile q, ω_t^q refers to the average transport budget share of quintile q, $\omega_{h\&r}^q$ refers to the average hotel and restaurant budget share of quintile q, and ω_{onf}^q refers to the average budget share of all other non-food consumption categories of quintile q.

We construct the quintile-specific budget shares directly from the microdata. To ensure that the average of the estimated quintile-specific inflation rates equals the actual overall inflation rate, we scale them with the ratio of the actual overall inflation rate to the average of the estimated quintile-specific inflation rates:

$$\pi_{T1}^{q,T2,adj} = \left(\frac{\pi_{T1}^{T2,actual}}{\sum_{q=1}^{5} \pi_{T1}^{q,T2}}\right)\pi_{T1}^{q,T2}$$

Having calculated quintile-specific inflation rates, we scale up the welfare distribution from year to year, starting with the year for which the latest harmonized microdata is available, and up to 2022. We start with the equation to nowcast poverty using the distribution-neutral approach:

$$c_{T2} = c_{T1}(1 + \delta g_{y,T1}^{T2}) \quad (1)$$

where c is individual welfare from the latest available survey in $T1$, and nowcasted individual welfare in subsequent years, $g_{y,T1}^{T2}$ is the real GDP per capita growth rate between T1 and T2, and δ refers to the pass-through rate.[29] This can be rewritten as:

$$c_{T2} = c_{T1}\left(1 + \delta\left(\frac{1 + g_{Y,T1}^{T2}}{1 + d_{T1}^{T2}} - 1\right)\right)$$

where $g_{Y,T1}^{T2}$ is the nominal GDP per capita growth rate between T1 and T2, and d_{T1}^{T2} is the growth rate of the GDP deflator between T1 and T2.

To introduce quintile-specific inflation rates, we then replace the growth rate of the GDP deflator with a function of the CPI-based quintile-specific inflation rate, because GDP deflators and CPI-based inflation rates are highly correlated (Wu and Yoshida, 2022):

$$d_{T1}^{T2} = \beta \pi_{T1}^{q,T2,adj}$$

$$\text{with} \quad \beta = d_{T1}^{T2}/\pi_{T1}^{T2}$$

We can then use the following equation to scale up individual welfare for each quintile:

$$c_{T2} = c_{T1}\left(1 + \delta\left(\frac{1 + g_{Y,T1}^{T2}}{1 + \beta \pi_{T1}^{q,T2.adj}} - 1\right)\right)$$

This provides an estimate of poverty in 2022 that incorporates the impact of inflation. To assess how the 2022 inflation spike affected poverty, we use inflation projections for 2022 prior to the invasion of Ukraine. These come

[29] We set the pass-through rate to 0.87. This is a medium pass-through as used in the default poverty projections for the World Bank MPO and based on simple cross-country regression for the growth rate in survey means on the growth rate from national accounts (World Bank, 2015).

from the World Bank MPO as of the Annual Meetings 2021 (AM2021), when the invasion and its impact on inflation could not yet be anticipated. We only modify the quintile-specific inflation rate, assuming that it is constant across quintiles. Given that dispersion in inflation rates is especially high during periods of high inflation (World Bank, 2023), we believe this is a reasonable assumption to make in the absence of projections of inflation rates for each consumption category and given low projected inflation at AM2021 (see Table AB.1. The growth rate of nominal per capita GDP, δ and β remain the same, in an attempt to isolate the impact inflation that exceeded the AM2021 projection.

Table AC.1 Actual and counterfactual inflation rates

	Counterfactual (AM2021)	Actual
Jamaica	5.9%	10.3%
Grenada	1.9%	2.5%
Saint Lucia	2.0%	6.4%

Source: Actual inflation rates come from STATIN and ECCB. Counterfactual inflation rates are projections produced by World Bank staff and published in the World Bank Annual Meetings MPO.

While the methodology to nowcast the poverty and distributional effects of inflation is relatively simple and based on a method that has proven to be relatively effective, it suffers from some limitations. First, the methodology does not account for behavioral responses to changes in prices, and as such only provides short-term effects. In the medium to long term, if prices remain high, households will substitute consumption of relatively costly goods and services by cheaper substitute products, hence changing their consumption patterns and the weight of the price increase in their consumption basket, attenuating the impact on households' living costs. Moreover, for Grenada and Saint Lucia, the household surveys are between 5 and 7 years old and simulations hence assume that consumption patterns have not changed since then. Second, it does not incorporate net seller effects, which would offset the consumption effect for producers or sellers of food items that experienced price increases. Third, the methodology does not incorporate changes in the labor market and assumes that all sectors grow at the same rate. While this is a strong assumption, we believe that it is acceptable if the focus in the assessment of the distributional impact of inflation. Results of a variant of this nowcasting methodology for West Africa region that incorporates sectoral growth show that most of the distributional effect compared to a distribution-neutral approach comes from the use of distribution-sensitive inflation rates.

Annex D. Distributional characteristics of key commodities affected by high inflation

To mitigate the impact of the raising prices on household welfare, the Jamaican government has put in place a series of interventions focused on food and electricity. Was this selection the most effective one? Would it be possible to mitigate the impact of the crisis by subsidizing other goods that would be more effective in reduce poverty and improving the welfare of the middle-income consumers?

To answer this question, we use consumption dominance curves (CDC), a valuable tool for analyzing the impact of tax reforms on poverty. For a good j consumed by n households, the consumption dominance curves is defined by:

$$CD^j(z,s) = \begin{cases} E\left[y^j | y = z\right] f(z) = \sum_{i=1}^{n} w_i K(z - y_i) y_i^j \quad if\ s = 1 \\ \sum_{i=1}^{n} w_i (z - y_i)_+^{s-2} y_i^j \quad if\ \geq 2 \end{cases}$$

where $K(.)$ is the kernel function, y^j is the consumption of j-th good, w_i the relative sampling weight of household i, z is the poverty line, and s the order of stochastic dominance.

For $s = 1$ the $CD^j(z,1)$ denotes simply the ratio of consumption of good k for an individual with consumption y=z by the aggregate population consumption of the good. For $s = 2$ the curve denotes the share of total consumption of good k consumed by individuals consumed by individuals whose consumption is less than z.

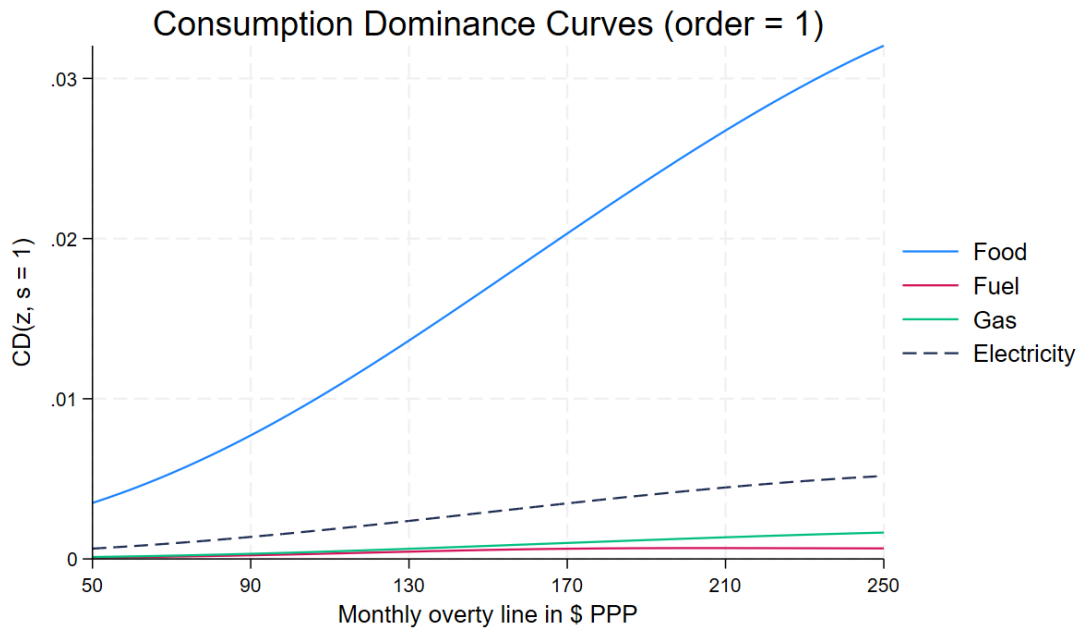
Now, if we consider two goods k and l. A necessary and sufficient condition for a marginal tax reform to reduce poverty is that the consumption dominance curves of good k is above (higher) that of good l, for a reasonable poverty line interval.

In the following, we consider 4 candidate goods: food, electricity, gas and fuel oil. We have plotted the curves for different threshold values ranging from \$50 PPP to \$250 PPP, per month. This interval reasonably covers international poverty lines ranging from \$2.15 to \$6.85 per day.

The results presented in the figure 1 below show that the best candidate for tax reform was food, followed by electricity, gas and fuel. Where the curves do not intersect, we can be satisfied with dominance of order 1. Higher orders of dominance will give the same results.

Figure AD.1 Consumption Dominance Curves

Consumption Dominance Curves



Source: Authors' calculation based on JSLC 2021

Hence, the choice of SP and subsidy reform for food and electricity seems reasonable, given that its distributional characteristics are better than those of fuel oil and gas.

Another, simpler but less rigorous way of examining the distributional characteristics of goods, and which allows the same conclusions to be drawn, is to examine consumption levels by decile. Table 2 shows that the poorest strata consume much more food and electricity than fuel and gas. Thus, any tax reform would be more beneficial than one affecting fuel oil and gas.

Table AD.1: Average per capita consumption by decile ($ PPP)

Deciles	Food	Fuel	Gas	Electricity
Decile 1	54.6	2.0	2.3	10.04
Decile 2	82.2	2.3	4.1	14
Decile 3	108.0	1.8	5.6	17.8
Decile 4	132.1	2.4	6.3	18.8
Decile 5	156.7	2.7	7.7	23.5
Decile 6	174.9	2.8	8.5	26.5
Decile 7	214.3	3.4	9.0	31.7

Decile 8	244.5	2.7	12.5	36.6
Decile 9	290.5	1.9	13.6	45.7
Decile 10	448.7	3.8	18.2	69.5
Total	190.6	2.6	8.8	29.4

Source: Authors' calculation based on JSLC 2021

Table AD. 1: Coverage rate by decile

		Deciles									
	Total	**D1**	**D2**	**D3**	**D4**	**D5**	**D6**	**D7**	**D8**	**D9**	**D10**
GoJ subsidy	75,8	79,1	90,3	93,3	92,4	87,9	82,5	79,1	74,4	47,9	30,9
Universal grid users subsidy	94,2	79,3	91,4	95,8	96,5	94,4	93,5	97,7	97,6	98,6	96,8
CT 80% population	80,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	0,2	0,0

Table AD. 2: Coverage rate by poverty status and area of residence

		Poverty Status			Area of residence	
	Total	**Extreme**	**Moderate**	**Non-poor**	**Urban**	**Rural**
GoJ subsidy	75,8	73,3	87,1	74,1	70,4	82,5
Universal grid users subsidy	94,2	73,3	87,5	96,2	95,0	93,1
CT 80% population	80,0	100,0	100,0	76,0	72,7	89,2

Table AD. 3: Average Transfer Value, Per Capita, Beneficiary Households, by decile

		Deciles									
	Total	**D1**	**D2**	**D3**	**D4**	**D5**	**D6**	**D7**	**D8**	**D9**	**D10**
GoJ subsidy	4,3	2,5	2,9	3,4	3,7	4,5	4,8	5,2	5,7	5,9	6,1
Universal grid users subsidy	6,2	2,5	3,1	3,7	4,0	5,0	5,6	6,5	7,5	9,3	14,3
CT 80% population	4,6	4,6	4,6	4,6	4,6	4,6	4,6	4,6	4,6	4,6	n.a.

Table AD. 4: Average Transfer Value, Per Capita, Beneficiary Households, by poverty status and area

		Poverty Status			Area of residence	
	Total	**Extremely**	**Moderate**	**Non-poor**	**Urban**	**Rural**

GoJ subsidy	4,3	2,3	2,8	4,6	4,8	3,7
Universal grid users subsidy	6,2	2,3	2,8	6,9	7,4	4,8
CT 80% population	4,6	4,6	4,6	4,6	4,6	4,6

Table AD. 5: Distribution of benefits by decile

		Deciles									
	Total	**D1**	**D2**	**D3**	**D4**	**D5**	**D6**	**D7**	**D8**	**D9**	**D10**
GoJ subsidy	100,0	6,2	8,2	9,9	10,6	12,4	12,2	12,7	13,3	8,7	5,9
Universal grid users subsidy	100,0	3,4	4,8	5,9	6,5	8,1	8,9	10,8	12,4	15,4	23,7
CT 80% population	100,0	12,5	12,4	12,5	12,5	12,5	12,4	12,5	12,5	0,0	0,0

Table AD. 6: Distribution of benefits by poverty status and area

		Poverty Status			**Area of residence**	
	Total	**Extreme**	**Moderate**	**Non-poor**	**Urban**	**Rural**
GoJ subsidy	100,0	2,1	9,6	88,3	58,5	41,5
Universal grid users subsidy	100,0	1,1	5,4	93,5	66,4	33,6
CT 80% population	100,0	4,8	16,1	79,0	50,6	49,4

	Upper poverty line				Lower poverty line		
	Reduction of poverty gap in million (dPG)	**Total amount spent in the program (X)**	**Benefit-Cost (dPG0/X)**		**Reduction of poverty gap in million (dPG)**	**Total amount spent in the program (X)**	**Benefit-Cost (dPG0/X)**
GoJ subsidy	1,0	8,8	0,12		0,2	8,8	0,02
Universal grid users subsidy	1,1	16,0	0,07		0,2	16,0	0,01
CT 80% population	2,1	10,1	0,21		0,5	10,1	0,05

Annex E. Traffic light scorecard for the assessment of the adaptability and flexibility of key SP program features and the essential delivery processes of the main cash transfer programs

1. Adaptive social protection features

Features	Nascent	Emerging	Established
CT programs are used to support non-beneficiaries affected by shocks (horizontal expansion)	No horizontal expansions of the main CT in response to shocks	One recent horizontal expansion in response to a shock	Various recent horizontal expansions in response to shocks
The vertical and horizontal expansion of flagship CT and/or implementation of emergency CT are established in legislation, policies or strategies	The relevant legislation, policies, and strategies do not establish the creation of an emergency CT program or launch the horizontal and vertical expansion of existing CTs in case of emergencies	The relevant legislation, policies, and strategies broadly indicate the role of SP in emergency support, but do not establish concretely the creation of an emergency CT program or the horizontal and vertical expansion of existing CTs	The relevant legislation, policies, and strategies establish the creation of an emergency CT program and/or the horizontal and vertical expansion of existing CTs
CT programs are used to support beneficiaries affected by shocks	No vertical expansions of the main CT in response to shocks	One recent vertical expansion in response to a shock	Various recent vertical expansions in response to shocks
Emergency CT program launched in response to a recent shock	No emergency CT program launched in response to a recent shock	Small-scale emergency CT program launched in response to a recent shock	Large-scale emergency CT program launched in response to a recent shock

2. Key delivery system processes

Intake and registration (front end, data collection)

Intake and registration	Nascent	Emerging	Established
Capacity for intake and registration of potential beneficiaries (via a social registry[23] or other mechanism)	Some organizational structures are in place but with limited guidelines or protocols to support operations and insufficient human resources and information technologies (IT) to process intake and registration	Organizational structures, guidelines, and protocols support effective operation of either the social registry or the system for intake and registration but there are gaps in human resources, operating budgets, and IT systems	Organizational structures and comprehensive guidelines and protocols supports effective operation of the social registry or of the system for intake and registration with adequate human resources, operating budgets, and IT systems
Mechanism for on-demand intake and registration is in place (via a social registry or other mechanism)	Not in place	Some capacity to absorb on-demand intake and registration but not fully	Intake and registration are on demand, open, and continuous
Post-shock intake and registration processes are in place (potentially for both, households already registered, and others), including post-disaster needs assessments by disaster risk management (DRM) and local authorities	No post-shock intake and registration processes are in place	Post-shock intake and registration processes are in place but with limited capacity to be rolled out rapidly and at large scale	Post-shock intake and registration processes are in place and with adequate capacity to be rolled out rapidly and at large scale

Registration processes (for the social registry or the flagship cash transfer program) are prepared to collect additional data during shock responses (for households already registered)	No processes to collect additional data during shock responses are in place	Processes to collect additional data during shock responses are in place, but the IT platform has not been adapted and the staff has not been trained accordingly	Processes to collect additional data during shock responses are in place, the IT platform has been adapted, and the staff has been trained accordingly
On-demand registration mechanisms are prepared to absorb additional demand post shocks	There are no on-demand registration mechanisms, or they have not been prepared for shock responses	Some measures have been implemented to prepare on-demand registration mechanisms, but they are still not capable of absorbing the demand arising from a large-scale shock (measures may include developing surge capacity, providing training, adapting the IT platform, tweaking processes and requirements)	On-demand registration mechanisms are prepared to absorb additional demand resulting from large-scale shocks (measures may include developing surge capacity, providing training, adapting the IT platform, tweaking processes and requirements)
Measures have been implemented to address the barriers to post-shock registration for the most vulnerable	No measures have been implemented	Some measures implemented to address the barriers to post-shock registration for the most vulnerable, but substantial barriers remain (measures may include waiving ID or other requirements, reducing the amount of data to be collected, and suspending household visits)	Various measures to address the barriers to post-shock registration for the most vulnerable are implemented, with (expected) substantial impact on such barriers (measures may include waiving ID requirements or other requirements, reducing the amount of data to be collected, and suspending household visits)
Mechanisms for post-shock data sharing are in place	No mechanisms or measures for post-shock data sharing are in place	Some mechanisms or measures for post-shock data sharing are in place, but with a small number of actors. Measures may include protocols and standards, memoranda of understanding (MoU), harmonization of questionnaires, and ex ante data exchanges that may include other social protection entities, DRM entities, humanitarian actors, and non-governmental organizations (NGOs)	Some mechanisms or measures for post-shock data sharing are in place and include a wide range of actors. Measures may include protocols and standards, MoU, harmonizing of questionnaires, and ex ante data exchanges that may include other social protection entities, DRM entities, humanitarian actors, and NGOs

Needs assessment (back-end application of targeting methods)

Needs assessment	Nascent	Emerging	Established

There is an established mechanism for assessing needs and conditions	There is a mechanism for assessing needs, but it is inefficient and infrequently used, and a large share of applicants is not assessed against clear eligibility criteria	There is a mechanism for assessing needs, but it is not automated, and a large share of applicants is assessed against clear eligibility criteria	There is a standardized and fully automated mechanism for assessing needs and conditions, and all applicants are assessed against clear eligibility criteria
Share of records older than three years in the social registry	Share is over 70 percent	Share is 15–70 percent	Share is 0–15 percent
Assessment processes to reach non-beneficiaries during shock responses are adapted	Assessment processes to target non-beneficiaries have not been adapted	Assessment processes to target non-beneficiaries have been adapted, but for a single shock only; measures may include increasing the poverty threshold and removing or including variables to better capture new conditions	Assessment processes to target non-beneficiaries have been adapted, but are adapted for various shocks that frequently affect the country; measures may include increasing the poverty threshold and removing or including variables to better capture new conditions
Robust verification processes are in place (including in-person verification and cross-checking with other data sources)	No verification processes are in place	Few verification processes in place	Verification processes are in place including both in-person verification and cross-checking with other data sources
The social registry or other mechanism for assessing needs and conditions covers most of the population	Coverage is low (less than 20 percent) with large differences in coverage across groups or locations	Coverage is moderate (20–40 percent) with moderate differences in coverage across groups or locations	Coverage is high (40–60 percent) with no significant differences in coverage across groups or locations, and systematic efforts are underway to expand and update the data
Social registry or beneficiary registry data are used to inform adaptive social protection (ASP)responses	Social registry or beneficiary registry data have not been used to inform ASP responses	Social registry or beneficiary registry data have been used to inform ASP responses on few occasions and on ad hoc basis	Social registry or beneficiary registry data are systematically leveraged for ASP responses
Social protection registries are risk informed	Social protection registries collect and contain data for their own programming (and not necessarily to inform preparedness and response actions)	Social protection registries collect and contain some data useful to inform preparedness and response actions, but collect data on an ad hoc basis	Social protection registries are shock informed, i.e., they collect and contain data useful for preparedness and response actions and such data are shared with relevant actors

Enrollment (often includes additional data collection)

Enrollment	Nascent	Emerging	Established
Requirements for enrollment of new beneficiaries during shocks are adapted	No requirements are adapted	Requirements for enrollment of new beneficiaries were adapted in a recent shock response (e.g., proof of identity, Know Your Customer regulations, and documentation to be presented), although no protocols are in place	Requirements for enrollment of new beneficiaries were adapted in a recent shock response (e.g., proof of identity, Know Your Customer regulations, and documentation to be presented), and protocols are in place
Enrollment procedures are adapted to ensure vulnerable groups can access social protection measures	Procedures for enrollment of vulnerable beneficiaries in a recent shock response (e.g., special assistance in filling out forms, translation services, transport, activation of multiple ways to enroll) were not adapted and no protocols and measures are in place	Procedures for enrollment of vulnerable beneficiaries were adapted in a recent shock response (e.g., special assistance in filling out forms, translation services, transport, activation of multiple ways to enroll), although no protocols and measures are in place	Procedures for enrollment of vulnerable beneficiaries were adapted in a recent shock response (e.g., special assistance in filling out forms, translation services, transport, activation of multiple ways to enroll), and protocols and measures are in place
Vulnerable households where shocks are more predictable and recurrent were pre-enrolled	No pre-enrollment established	Vulnerable households were pre-enrolled in a small-scale pilot project	Vulnerable households were pre-enrolled at a large scale
Automatic enrollment for shock responses	No automatic enrollment established	Automatic enrollment was enabled in a recent shock response on ad hoc basis, although it is not a measure established for future shocks	Automatic enrollment was enabled in a recent shock response, and it is a measure established for future shocks with protocols in place
Remote enrollment for shock responses	No remote enrollment enabled	Remote enrollment (online and/or phone) was enabled in a recent shock response on ad hoc basis, although it is not a measure established for future shocks	Remote enrollment (online and/or phone) was enabled in a recent shock response and is a measure established for future shocks with protocols in place)
Beneficiary registries are digital	The flagship cash transfer (CT) program has no beneficiary registry or the registry is paper or Excel based, or similar	The flagship CT has a digital beneficiary registry with the supporting management information systems (MIS) but other CTs do not	All CTs have digital beneficiary registries with the supporting MIS
Data are collected electronically	No electronic data collection or only for one or two programs	Electronic data collection used for some programs	Electronic data collection used for most programs and all key programs

Payments (delivery of cash)

Payments	Nascent	Emerging	Established

CTs are delivered into transaction accounts (mobile money accounts or financial institution accounts)	Most CTs are delivered through manual mechanisms	Main CTs are delivered electronically, but delivery is limited to non-account-based methods	All CTs are delivered electronically, most rely on fully functional account-based methods (rather than limited purpose accounts), and beneficiaries can cash out
CT beneficiaries can choose the payment method and provider, which enhances resilience to shocks	CT beneficiaries have no choice of payment method or provider	CT beneficiaries have very limited choice of payment method or provider	CT beneficiaries choose the payment method and provider
CT programs share the same payment infrastructure and centralized payment execution	Each CT program has its own point-to-point connection with the provider	Many CT programs use the same payment infrastructure	Many CT programs use the same payment infrastructure and payment execution is centralized by the treasury
The payment mechanism of the main CT program is flexible to respond to shocks	No protocols or measures are in place to make the payment mechanism of the main CT program flexible to respond to shocks	Some protocols or measures to make the payment mechanism of the main CT program flexible to respond to shocks have been implemented, but to a very limited extent	Protocols and measures to make the payment mechanism of the main CT program flexible to respond to shocks are in place